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MAY, 1917

FINANCING THE WAR

SUMMARY

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I

SINCE no one can foretell where any war may lead or foresee how long it may last, the military and financial policies of the United States should contemplate a long contest of the first magnitude. The war which has convulsed Europe for nearly three years may be nearer its end than we suppose; but we have no right to take anything for granted, and should prepare for a contest that may demand the complete mobilization of the material and human resources of the country. In finance this means that we need a program. Intelligent foresight and comprehensive grasp of the situation should from

the very outset control, and shortsighted or temporizing measures should be carefully avoided. Mistakes can be made during the next six months that will disorganize our currency, injure our credit, and enormously increase the cost of the war. Upon the other hand, by adopting a sound financial program now, we can, with a minimum of friction and waste, raise all the funds that may be needed to finance even this greatest of wars.

In such a program the first requisite is obviously economy in all expenditures, public as well as private. For the time being the chief business of the country must be to divert enormous sums from other objects and to devote them to the maintenance of armaments. This means that we shall have to go without many things that we might otherwise have, which is to say that we must practice economy. The citizen must be prepared to retrench in his private expenditures in order that the extraordinary needs of the government may be supplied, and the government should do its part by husbanding its resources with the utmost care. Heavy taxation of luxuries will give the citizen an extra inducement to perform his duty; nothing but rigid economy and efficiency will enable the government to do its part. At such a time private luxury and pork barrel legislation fall under the same condemnation. New undertakings not related directly or indirectly to military operations should be confined within the narrowest possible limits. And finally, if we are ever to have a rational budget system, the present is obviously the time for its introduction. This Congress should not adjourn without providing for a complete reorganization of future budgetary procedure.

So far there can be little disagreement, but concerning the next point there may be difference of opinion. In financing a great war, revenue from taxa-

tion must be supplemented by loans, but neither in theory nor in practice is there universal agreement concerning the proportions in which the two expedients should be employed. Since this is the most fundamental question connected with a program of war finance, it requires most careful consideration.

II

The first theory of war financiering is that upon which most wars have been conducted ever since the invention of national debts. According to it, the extraordinary outlay of a war should be financed by loans in order to avoid the inconvenience and disturbance occasioned by a heavy increase of taxation. Such a policy is deemed to be fair because it throws at least a part of the burden upon future generations, and is ordinarily adopted in full confidence that it will suffice for all probable needs. In short wars that make no serious demands upon a nation's resources it has often worked well enough, but in every protracted struggle it has spelled disaster. Of this our own history affords most striking and conclusive demonstration.

During the Revolutionary War our government possessed no effective power of taxation, and its experience affords no fair test of the financial policies which it adopted. In 1812, however, it possessed authority to levy taxes ample for all needs, and the wisdom of its financial measures may be tested fairly by their results. As early as 1807, when war was thought to be inevitable, Secretary Gallatin had outlined the policy which the United States subsequently followed, proposing that war expenditures should be defrayed by loans, and that taxes should be levied only in the amount necessary to provide for the expenses of government on a peace

establishment and for interest on any new loans that might be created.[1] This plan of financing a war received a perfectly fair trial during the next three years because, out of a total extraordinary expenditure of $70,000,000, nearly 10 per cent was financed by taxation, so that somewhat less reliance was placed upon loans than Gallatin's theory strictly called for.[2] The result was failure, complete and decisive, leading to something very near a financial breakdown. It soon became difficult to float interest-bearing loans because investors saw the government's liabilities rapidly increasing without any material increase in its revenues, by which alone, of course, its ability or willingness to provide for its obligations could be safely judged. Treasury notes had to be issued in increasing amounts which tended to inflate the currency and therefore to increase the cost of the war. After the government's credit had been impaired additional taxes were at length imposed, but they yielded little revenue until the very end of the war when the mischief had already been done. In sum, impaired credit, currency inflation, and threatened collapse were the unmistakable results of this attempt to finance war expenditures exclusively by loans.

By 1846, when the Mexican War began, the lesson of 1812 appears to have been forgotten, and the same financial policy was adopted which had failed so signally a generation before. But the resources of the country had greatly increased, and the war proved a comparatively small affair which lasted less than two years and

[1] It should be said for Gallatin, however, that he advocated this policy because he thought that the war would so injure the commerce of the United States as to decrease the resources available for taxation, and that he recognised that under different conditions it might be "practicable and wise to raise by taxes the greater part, at least, of the annual supplies."

[2] Data upon this point, as well as upon the entire subject of the finances of the War of 1812, may be found conveniently in H. C. Adams's Public Debts, pp. 116–26, and D. R. Dewey's Financial History of the United States, pp. 128–42.

occasioned no strain upon our finances. Without levying internal taxes, the government contrived to meet some $14,600,000 of war expenditures out of ordinary revenues, while incurring a net indebtedness of some $49,000,000.[1] This time the loan policy had worked well enough, yet its success was due, not to its inherent strength, but to the short duration and comparatively trifling magnitude of the strain to which it was subjected. Under different conditions there is no reason for supposing that it would have worked any better than it did in 1812.

When the Civil War broke upon the country, it was natural that the government should revert to the policy followed in the war with Mexico. Secretary Chase recommended[2] that taxation should be confined to the amount needed for the ordinary expenses of the government and for interest upon loans, and that extraordinary expenses should be met by borrowing, estimating that this plan would require $80,000,000 to be raised by taxes and $240,000,000 to be procured by loans. Congress acted upon the secretary's advice, imposing such new taxation as appeared to be called for and authorizing a loan of $250,000,000. Thus the country entered upon a conflict which lasted four years and required unprecedented outlays, with a plan of finance that might have sufficed for another Mexican war but was certain to fail in a conflict of greater duration and magnitude.

The situation was complicated by a variety of circumstances, chiefly the unsatisfactory state banking system, which would have caused much embarrassment in any event; but after all allowance is made it is clear that Chase's plan received a fair trial, and that it failed as signally as Gallatin's plan in 1812. Difficulty was

[1] Dewey, op. cit., pp. 255–56.

[2] Report on the Finances, July 4, 1861.

encountered at the very outset in floating bonds, and $60,000,000 of demand notes were authorized in 1861. These were followed in 1862 and 1863 by a much larger amount of legal tender notes, the so-called greenbacks, and by a variety of other short term obligations. Not until the third year of the war did long term loans begin to preponderate, and even in the fourth year interest-bearing notes actually exceeded the bond issues of the government. The inevitable result was currency inflation, by which the cost of the war was enhanced some hundreds of millions, and credit impairment which seriously hampered the government's financial operations.

After much mischief had been done, but in time to save the situation, Congress, which in this matter showed more wisdom than the secretary, imposed heavy taxes to which the country loyally responded. Indeed, after the first year, the people seemed frequently wiser than their rulers, and the action of Congress in increasing taxation was partly in response to a widespread popular demand. This fact greatly impressed foreign observers, one of whom remarked to Mr. Seward: "I was not surprised to see your young men rushing enthusiastically to fight for their flag. I have seen that in other countries. But I have never before seen a country where the people were clamorous for taxation." And von Hock, the Austrian economist, has left on record the fact that he was attracted to the study of American financial history by the "wonderful spectacle" of a people who after being free from internal taxation for nearly half a century, "through love of country and zeal for the rights of humanity," willingly submitted to the heaviest taxation and assumed the burden of an enormous debt.[1]

[1] C. F. von Hock, Die Finansen und die Finanzgeschichte der Vereinigten Staaten von Amerika, Vorrede.

But time was required to devise a new system of internal taxation and get it into successful operation, so that not until the end of the war did the revenue from taxes attain its due proportion to the government's loans. In the first year taxes brought in $50,851,000, while loans and notes produced $433,663,000, the ratio of taxes to loans and notes being 1: 8.5. In the second year taxes yielded $108,185,000, and loans and notes $596,203,000, the ratio being 1:5.5 The third year the tax revenue was $212,532,000, and the loans and notes amounted to $719,476,000, the ratio standing at 1:3.4. And finally, in 1864–65, taxes supplied $295,593,000, while the loans stood at $872,574,000, the ratio being 1:2.9.[1]

By 1863, Secretary Chase was convinced of the unsoundness of the theory upon which the war up to that time had been financed, and in his annual report called attention to "the great importance of providing, beyond all contingency, for ordinary expenditures and interest on debt, and for the largest possible amount of extraordinary expenditures, by taxation." And he added: "It is hardly too much — perhaps hardly enough — to say that every dollar raised for extraordinary expenditures or reduction of debt is worth two in the increased value of national securities, and increased facilities for the negotiation of indispensable loans." [2] Hindsight is always easier than foresight, but it is usually more expensive; and the dear experience which brought Secretary Chase to the correct position which he took in 1863 ought not to be necessary in 1917. Since no internal revenue system existed in 1861, six months or a year would have elapsed inevitably before increased

[1] For these figures and other data about the Civil War finances see Dewey, op. cit., pp. 298–330; Adams, Public Debts, pp. 126–33.

[2] House Ex. Docs., vol. vi, no. 3, pp. 10–12, 38th Cong., 1st Sess.

tax revenue could have been procured, but there was no reason why in 1862 and 1863 the treasury might not have been as amply supplied as it was in 1864 and 1865. As Professor Henry C. Adams, to whom we owe the first scientific criticism of our Civil War finances, has so justly observed, it is not easy to overestimate the financial benefits that would have accrued if the receipts from internal revenue could have been moved forward by two years.[1]

In the Spanish War for the first time in its history the United States followed the correct theory of emergency financiering. The act of June 13, 1898, which authorized a loan of $200,000,000, also levied new internal taxes which, since the machinery of collection was already in existence, almost immediately increased the tax receipts and were presently furnishing an additional annual revenue of some $100,000,000. The war was of such limited scope and duration that the older theories of Gallatin and Chase could have been followed without causing disaster. But the sounder policy which actually prevailed has established a safer and better precedent which should be followed in the present great emergency. It cannot be doubted that, in the words of Professor Adams, "an adequate policy for the management of war finances is a tax policy assisted by credits rather than a credit policy assisted by taxes."[2]

The same lesson is taught by the experience of Great Britain and Germany in the present war. German theory and practice have long inclined unduly to favor public loans. This is probably due in some measure to the influence of Karl Dietzel, who taught that the State is a part of the capital of a country, and that outlays for the extension and strengthening of the State may be

[1] Adams, op. cit., p. 132.

[2] H. C. Adams, Science of Finance, p. 542.

safely financed by borrowing.[1] It is due also to the successful financing of former wars by loans and indemnities. It was natural, therefore, that the German government should undertake to finance the present war by public loans which, according to report, have been utilized even for the purpose of paying interest. Only recently has taxation been materially increased, and a recent outgiving of the Kaiser indicates that he finds ground for satisfaction in the fact that taxes have now been levied to provide for interest upon war loans. The result is that one of the greatest of Germany's problems today is the state of her finances, and that serious doubt is expressed concerning the success of the next loans. Upon the other hand, Great Britain, altho compelled to borrow huge sums, has steadily increased her revenue from taxation, and is at present financing from this source no small part of her war expenditures. So far as the outcome of the war depends upon possession of the longer purse, there is no doubt as to which antagonist has the advantage at the present time.

There are three main reasons why the exclusive loan policy has always failed under a severe and protracted test. Public credit depends primarily upon the ability and willingness of a government to support loans by substantial revenues from taxation; and when the latter are not provided, an impairment of credit inevitably follows. In the second place, if taxation is not increased in time of war, private expenditures are not curtailed, and the government must bid against its citizens when it purchases supplies, with the result that prices rise and inflation naturally ensues. Finally the security of public loans varies inversely as their volume, so that, as debts accumulate, a government's obligations at last become

[1] Das System der Staatsanleihen (1855).

unattractive to investors. Ordinary prudence, therefore, dictates that a war should be financed as far as practicable by increased taxation, and that loans should be employed as sparingly as possible.

III

The failure of the exclusive loan policy under any severe strain and the evils resulting from the swollen national debts which it entails have led not unnaturally to a second theory of emergency financiering which goes to the opposite extreme. Early in the nineteenth century David Ricardo, impressed by the condition in which Great Britain found itself in 1815, contended that wars should be financed wholly by taxation; and this theory now finds numerous advocates in the United States who would have the government avoid all loans, except such as may be necessary during the first few months, and finance the war wholly by taxes levied principally upon income and war profits. Since the practical difficulties of the plan are tolerably obvious, and it seems evident that for the present, at least, the government is unlikely to venture upon such a rash experiment, I will not undertake to consider it in this paper.

A sound program of war finance must avoid the extremes of exclusive reliance upon loans and exclusive reliance upon taxation. It will draw upon the supply of loanable capital in the hands of investors, and will also employ taxation to as great an extent as may be consistent with the welfare of industry. It must, except in direst need, avoid unnecessary strain upon any part of our industrial organization. We should tax heavily in order to minimize the strain upon national credit; but we must permit industry to prosper, and allow time for

the readjustments which are going to be necessary. This means that at the outset we must rely rather more upon loans than upon taxation, and that, as the war proceeds, taxation should be increased as rapidly as experience shows this to be practicable. It is to be hoped that this is what President Wilson had in mind when he recommended that the war outlays be financed, "so far as they can equitably be sustained by the present generation, by well-conceived taxation."

There can be no doubt that the tax revenues of the government can be, and should be, increased immediately by not less than $1,000,000,000. Only the most careful investigation can show how far beyond that figure taxation can prudently be carried this year. Much depends upon our forecast of business conditions. If these can be expected to remain as favorable as they were in 1916, taxation can obviously be carried further than if we must look forward to a year of less prosperity. I venture in the most tentative way to offer the following suggestions.

The income tax should be increased as much as can be done without forcing too severe or abrupt readjustments. This will require numerous amendments to the present law, which will be considered in the concluding pages of this article.

The recently established tax upon excess profits, however objectionable in ordinary times, can be somewhat increased, but ought not to be made retroactive if that can possibly be avoided. The large profits of the last two years are not wholly disposable income. In many cases they must go to pay for new plants, or are needed for working capital. While war contracts have proved bonanzas in some cases, they have involved very large commitments for which full payment has not yet been made, and serious results

might follow if taxation of excess profits should be carried too far.

By the act of March 3, 1917, the rates of the federal estate tax were raised to very high figures, which ought not to be increased. Beginning with a rate of 1½ per cent upon estates having a net value not in excess of $50,000, they reach the figure of 6 per cent upon the excess of any estate above $250,000, 9 per cent upon the excess of any estate above $1,000,000, and 15 per cent upon the excess of any estate above $5,000,000. Taken in connection with the inheritance taxes levied by the states, these rates are probably excessive. Since an estate or an inheritance tax does not fall equally upon all property in any year, but only upon property transferred in a particular way, its rate should be stable, in order that the amount of tax paid shall depend upon the size of a man's estate and not upon the year in which he dies. It is, therefore, not fit to be used as an emergency tax, and increase of the present rates should be avoided. After the war is over, some understanding and adjustment must be reached in state and federal taxation of inheritances. The claims of the states cannot be considered now, but the federal government should at least avoid making a bad situation worse. It is to be hoped also that Congress will not omit to make some adjustment for those who may lose their lives at the front.

The taxes upon tobacco, beer, and spirits should be immediately increased. That on spirits could probably be raised to $1.50 per proof gallon without making it difficult to enforce, and if the Bureau of Internal Revenue so advises, should be increased to $2.00 per proof gallon. That upon beer ought to be raised to at least $2.00, the rate which prevailed during the Spanish War, and unless administrative reasons forbid, should be increased to $2.50 or $3.00. The tax upon tobacco

is much lower than is imposed by many other countries, and I see no reason why it should not be advanced to twenty cents per pound upon smoking and chewing tobacco, with a corresponding increase in the rate upon cigars and cigarettes. From these three duties an additional annual revenue of $150,000,000 and upward can probably be obtained.

Stamp taxes, such as were levied during the Spanish War, should at once be reimposed, and with such rates as would be justified in the present emergency might readily be made to yield from $80,000,000 to $100,000,000. To these should certainly be added taxes upon theatre tickets and tickets of admission to moving picture exhibitions, while advertisements of all descriptions might well be laid under contribution.

A heavy tax ought to be levied upon gasoline, since the government will have to purchase large amounts of this commodity for its own use and ought to discourage consumption by automobiles and motor boats.

Finally, import duties should be imposed upon tea, coffee, and cocoa, which are now untaxed and could readily yield $60,000,000 per annum. There are doubtless other imported luxuries upon which duties can be increased. It would seem also that the present emergency calls for the restoration of the sugar duty to the point of maximum revenue.

All these suggestions, with the exception of that relating to sugar, are premised on the theory that it is practicable and desirable to raise somewhat more than $1,000,000,000 from taxes that will not tend to increase the cost of articles necessary for subsistence. More detailed investigation, such as I have not had opportunity to make, might show that very much more revenue can be raised without undesirable results; and if so, taxation ought to be carried further than I have

ventured to suggest. But, whatever plan of finance may be adopted, we can hardly avoid an upward tendency of prices during the coming year, and such a tendency ought not to be accentuated by a general excise system such as was introduced during the Civil War. If later on more revenue is needed than can be obtained from other taxes, it will be possible to make a more extensive use of customs and excises, but for the present this should be avoided. It is obvious, therefore, that the suggestions here made leave untapped vast resources of indirect taxation upon which the government can draw in case of need.

As this is written, the Treasury Department has just given out a comprehensive plan for the first war loans. Since this may be subject to change, I will not consider it in detail but will confine myself to some general observations concerning public borrowing in time of war.

It is to be hoped that the government, whatever else it does, will minimize its use of transferable certificates or obligations. Such evidences of indebtedness, even tho issued in large denominations, can serve to some extent as a medium of exchange, and therefore are very dangerous. One of the great evils of Civil War finance was the large resort to short term notes and certificates which more or less contributed to the inflation of the period. If money is needed during the next few months in anticipation of taxes or permanent loans, the government ought to borrow from the banks in the ordinary way, and avoid, if possible, the issue of transferable notes or certificates. Any temporary obligations issued should be in large denominations, should run for short periods, and should be transferable only by registration. This may require a somewhat higher rate of interest, but that is a small consideration compared with the danger of inflation.

The important thing, to which other considerations for the time being should be subordinated, is to issue long term loans that will be attractive as permanent investments. This requires first of all that such loans shall be convertible into any others that may subsequently be issued at higher rates of interest, and very wisely the Treasury Department has provided for this in the bill recently submitted to Congress. All investors should be treated alike, and the first issues will certainly not be as well received if subscribers face the possibility that the value of bonds may subsequently fall as a result of the issue of new loans at higher rates of interest.

It is further important that the Treasury should be authorized to deposit in any banks the money raised by loans. The huge sums needed ought not to be withdrawn from the ordinary commercial banks and accumulated either in the federal treasury or to an undue extent in the Federal Reserve Banks. They should be kept as nearly as possible in their accustomed places in order to minimize the disturbance occasioned by the loans. This arrangement will obviously give to all banks greater ability to encourage and assist their depositors to subscribe to the loans.

Another leading consideration is that controllability is more important than the rate of interest which the government pays during the duration of the war. For emergency financiering it is probable that no better security can be devised than a 5–20 or 5–25 bond, redeemable at the option of the government after five years, and payable at the end of twenty or twenty-five years. Experience with our federal sinking fund has been so unsatisfactory that it ought to be provided that, after the war, the present loans should be payable on the serial plan in equal annual instalments. Provision should be made, however, that, in case of a future war,

the government should be permitted to suspend redemption in order that it may never be in a position where it will be obliged to pay off instalments of old debt while contracting new loans at a higher rate of interest. War loans of the United States should first of all be controllable so that they may be refunded upon more favorable terms, if that becomes possible after the war; and provision should then be made to insure their repayment within a reasonable number of years.

It would be a great mistake at this juncture to regard the rate of interest paid during the war as the primary consideration. Rapid absorption of loans by permanent investors is vastly more important. In proposing to borrow $5,000,000,000 at 3½ per cent the government is stressing the wrong factor in the problem; and in order to do this, is making a bad bargain by exempting the bonds from the income tax, as will be pointed out later. Unusual conditions may enable the United States to float, in instalments, $5,000,000,000 of bonds at 3½ per cent, but nothing except a bad bargain with income taxpayers will make that possible. The moment that subscriptions lag, it is very important that the rate of interest should be permanently increased. At such a time there will be temptation to resort to temporary financing which may injure the credit of the government and easily take a form that will cause inflation. This was one of the principal errors committed during the Civil War, and it ought not to be repeated today. If provision is made by which bonds may be refunded at the end of five years, it will be far cheaper for the government to offer a higher rate of interest and avoid temporary expedients that are likely to increase greatly the cost of the war.

Another thing to be avoided, if possible, is commandeering the resources of the Federal Reserve Banks and

the other banks that are members of the reserve system. Financial institutions must, indeed, do their utmost to facilitate the floating of loans, and they should also make such temporary loans to the government as their condition will permit. But if serious trouble is to be avoided, the resources of all banks should be kept as liquid as possible, and they should not be expected to absorb a large part of the permanent loans. We are entering upon a period of readjustment, and the banks should be permitted to function as nearly as possible in a normal manner. Every dollar taken from the liquid resources of the banks may diminish by three or four their ability to assist in placing permanent loans.

IV

Whatever plan of finance may be adopted, it is certain that the income tax must be materially increased; and I shall conclude this paper with some observations concerning that tax.

The exemptions now granted under the normal tax are much too high, and should be reduced. In 1913 liberal exemptions were justified on purely administrative grounds, if upon no other, but today the tax is in successful operation and such considerations no longer control. I venture to suggest that the exemption to a single individual be reduced to $1000, and that an exemption of $2000 be granted to husband and wife. An additional exemption of $200 might then be made for each minor child up to the number of five, with the result that for a family of seven persons the total exemption would be $3000. Such an arrangement would yield a substantial amount of revenue from incomes that now contribute nothing, and would still allow a generous scale of exemptions.

In the next place, specific and effective provision should be made for including in a person's taxable income the fair rental value of a dwelling-house occupied by the owner and the fair value of produce consumed on a farm. The exemption of these items introduces into the present law a serious inequality, since it exempts an important part of the real income of certain classes of taxpayers while other classes are taxed upon money incomes expended for house rent and household supplies.

The ordinary tax upon corporations will be difficult to increase without changes in the provisions relating to collection at source. At present the average corporation is obliged to assume payment of the ordinary tax upon bond interest and upon that part of the profits distributed to holders of preferred stock. It therefore comes about, if the tax is not shifted, that the holders of common stock may be taxed at two or three times the ordinary rate. Further than this, the present law, by refusing to grant a deduction for taxes paid by subsidiary corporations, imposes a multiple tax upon some portions of the income of many companies; with the result that, if the ordinary tax is increased, the burden of such multiple taxation may become very serious. With a rate of 5 per cent, which might not otherwise be excessive, some corporations would be compelled to pay taxes amounting to 10 or even 15 per cent of the income available for distribution to holders of common stock. This difficulty may not have been great when the rate of taxation was one per cent, but it cannot be left out of account if the rate is to be increased to meet the present emergency.

I have discussed in another place[1] the problems arising from the attempt to collect the ordinary tax at

[1] Proceedings of the National Tax Association, vol. viii, pp. 264–79.

the source, and will not dwell upon the subject in this paper. But it is clear that the present law, in its application to corporations, has given us in effect a business tax which exempts large numbers of investors and falls with very unequal weight upon holders of common stock. In the case of public service companies, the present tax imposes a burden which must be taken into account in the adjustment of rates, and is bound to be shifted in the long run either in the form of higher charges or poorer service. Regulating commissions may, indeed, proceed upon the theory that taxes should be disregarded in determining reasonable rates; but recurring charges cannot be met indefinitely out of surplus account, and in some cases surpluses have already fallen below the point where they should be maintained in order to protect the credit of the companies. Collection at the source, when it was adopted, seemed to offer important advantages in administration, but it has produced other results which must now be taken into account if the rate of the ordinary tax is to be increased.

By the introduction of a system of information at the source, the difficulties now attending the operation of the ordinary tax could be wholly removed, and the burden of that tax would be placed upon investors where it really belongs. Such a system would be quite as effective in preventing evasion of the ordinary tax, and it would give the government a great deal of valuable information it does not now possess concerning incomes subject to the additional tax. The experience of Wisconsin and, more recently, that of Massachusetts have shown that, with just and effective administration, a system of personal returns, supplemented by information at source, will insure collection of the tax; so that there is now no reason to suppose that the federal government cannot tax incomes unless it employs the

method of collection at source. During the present year under the Massachusetts income tax more than 180,000 returns have been received, and it is already evident that the tax has been a success. The state now has a large body of information which would be useful to the federal collectors, and if the United States would adopt the principle of information at source, provision could then be made for most helpful coöperation between federal and state authorities in taxing incomes.

The additional tax levied by the federal government is now imposed upon investors, as the ordinary tax ought to be. It has therefore avoided the difficulties to which I have just referred, but unfortunately encounters another difficulty. Since it is a progressive tax, it ought to be imposed upon the whole income of the taxpayer, because it proceeds upon the theory that ability to contribute increases with the size of a man's income. But the present law exempts income from United States bonds, from the obligations of a state or any political subdivision thereof, and from securities issued under the provisions of the Federal Farm Loan Act of 1916. The result is that the scale of progression is in practice governed not by the amount of a taxpayer's income, but by the character of his investments. Even with its present rates, the additional tax has created an artificial demand for tax-exempt securities; and if the rates are increased, this demand will be greatly intensified.

Assuming that the interest on outstanding bonds of the United States must in any case be exempt, it is all the more important that a correct policy should be followed in respect to new loans. If the government were levying only a proportional tax, it could reasonably expect that exemption of the bonds would lead to a corresponding enhancement of their prices. But the additional tax gives to large investors a much greater

inducement to purchase government bonds than the ordinary tax gives to the small investor, and it is certain that the price of the bonds will not be enhanced to a degree commensurate with the exemption secured by persons having large incomes. To this point attention has already been called by Professor T. S. Adams.[1] It is true, of course, that if people with the largest incomes could, or would, absorb the whole of the new loans, the price of bonds would be increased to an extent commensurate with the advantage of exemption from the additional tax. But a great part of the loans must be taken by persons with smaller incomes who will not pay so great a premium for them, and the price will be fixed by this class of marginal investors. If, therefore, the bonds are exempted, it is clear that the government will not receive in the form of a higher price an equivalent of the exemption from the additional tax, which exemption, be it noted, not only relieves large taxpayers from taxation upon interest received from the government, but also reduces the rate of the additional tax upon the rest of their income. This difficulty may not at the present moment offset the advantage derived from a rapid absorption of the war loans, which is manifestly the great desideratum. But it is an additional reason for providing that the loans shall be redeemable at the expiration of five years.

In any event, it is clear that the exemption of state and municipal bonds and the exemption of securities hereafter issued under the Farm Loan Act ought not to be continued. The latter exemption may be small today, but it will steadily increase in importance, and will vitiate the operation of the progressive tax as long as it continues. The former is already important, and should receive immediate consideration. State and

[1] The New Republic, April 7, 1917.

municipal bonds for two or three years past have been in unusual demand because they are free from the federal income tax. As the rate of the additional tax is increased, it is obvious that there will be a greater artificial demand for such securities, which would be undesirable under any circumstances and is positively dangerous now. This is not a time when states and municipalities should compete with the United States for loans, so that the situation calls imperatively for taxation of state and municipal obligations. It is true that in the case of Pollock *v.* the Farmers' Loan and Trust Company, in 1895, the Supreme Court of the United States held that the federal government had no power to tax state and municipal bonds. But this decision has been overruled by the adoption of the sixteenth amendment, which expressly authorizes Congress to levy taxes on incomes "from whatever source derived." Upon other grounds it would be desirable to bring to an end the policy of exempting any class of securities from the income tax, since such exemption creates a large class of investors who, to the extent that they hold "non-taxables," have no interest in governmental expenditures. With the adoption of highly progressive rates, the policy of exemption becomes a rank absurdity, and the present is certainly the time to bring it to an end.

Readjustment of the rates of the income tax will, of course, be necessary. If the normal tax could be reorganized so as to place the burden upon the right shoulders, its rate could be increased to 5 per cent. If such reorganization is not effected, the rate of the ordinary tax should probably be left at about its present figure, and the additional tax should be imposed upon incomes in excess of $4000 or $5000. For the year 1917 the maximum rate on incomes subject to the additional tax should not exceed 25 per cent. Since revenue is

immediately needed, perhaps the best course would be to make a surcharge of 50 per cent upon all income taxes levied this spring under the act of September 8, 1916. This would give a maximum rate of 19½ per cent for the additional tax upon increments of income in excess of $2,000,000, to which would be added 2 per cent more on account of the normal tax. For the taxes levied in 1918 in respect of incomes received or accrued during the year 1917, higher rates will be desirable; and if the war should continue for three years, still higher rates must be imposed. It is probable that for 1918 the additional tax, without injury to industry, can be raised to 40 per cent upon increments of income subject to the highest rate and that the following year it can be increased to 50 per cent. In this matter, however, Congress should be guided by the conditions of business at the time decision is made, and it would be rash to try to determine at the present moment precisely what the ultimate limits of income taxation ought to be.

The general principle to be followed is that of charging what industry will bear. For the year 1917 commitments have been made, and only a certain amount of readjustment is desirable or possible. In 1918, however, many readjustments will have been effected, and the income tax can be increased to a figure which would not be justified at the present moment. It is not a question of duty or willingness to contribute, but one of changing industries and investment markets from a peace to a war footing. The purpose of Congress should be to effect this transition in such a manner as not to decrease the amount of taxable income, and therefore the source of revenue, available in the second and third years of what may prove to be a protracted war.

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INTERNATIONAL TRADE UNDER DEPRECIATED PAPER. A CONTRIBUTION TO THEORY

SUMMARY

I. An assumed case of large foreign borrowing by a paper money country, 381. — Consequences on the rates of foreign exchange, 382. — A digression: present conditions in Germany and Europe abnormal, and little pertinent to this discussion, 384. — Effects under ordinary conditions on the prices of exported and imported goods, 386. — A transition stage; is there a bounty on exports? 388. — II. Ultimate effects, as they would be if both countries were on the gold basis, 391. — In what way, in such case, international lending may lead directly to increased exports of merchandise, 392. — But increased exports are usually the indirect consequence of gold movements, 394. — Resulting changes in relative wages and prices, 395. — No such mechanism, however, in case of depreciated paper, 396. — An analogous result, yet a different one, through the movement of goods, 397. — III. Difficulty of verifying this analysis through inductive inquiry, 400. — Partial verification of a confirmatory character not impossible, 402.

THE usual statement of the theory of international trade and of the foreign exchanges assumes that the same metal — gold, — is the basis of the circulating medium in the trading countries, and moves freely from one to another. The quotations of foreign exchange range between the narrow limits of the gold points. A comparatively slight disturbance of international payments leads to a flow of specie, and sets in motion a train of forces, either in the money market in the narrower sense or in the general price market, which tend to check the flow of specie and bring about a new equilibrium. It is obvious, however, that this machinery cannot operate under dislocated exchanges, where the

monetary systems of the trading countries do not rest on the same basis. The mechanism is necessarily different. Then the transactions between countries are affected by fluctuations in foreign exchange much greater, as well as more rapid, than can take place where all are on the gold standard; the compensating influence of gold shipments is lacking.

Much as has been written upon this subject, especially in connection with the changes in the price of silver and the consequent fluctuations in exchange between gold-using and silver-using countries, the theoretic aspects of the problem have not been exhausted. More particularly the course of "international values" has received scant attention; meaning by that term not the foreign exchanges, but the eventual outcome in the barter of commodities for commodities between nations, and so in the gains ultimately secured from international trade. The present paper deals not only with the mode in which the mechanism functions under the quasi-abnormal conditions, but also with the ultimate consequences on international barter under these same conditions.

I

For the purpose of analyzing and illustrating the principles involved, resort may be made to the familiar method of hypothetical isolation of causes. Let it be assumed that there are two countries, Great Britain and the United States, one of them under a gold standard, the other having inconvertible paper currency. This, of course, was in fact the situation during the period from 1862 to 1879. Let it be assumed further that at the outset foreign trade between the two countries is simple and is at equilibrium — that there are merchandise transactions only, and that the specie

value of the imports balances the specie value of the exports. It is a natural and probably necessary part of this general assumption to suppose also that the specie premium in the United States conforms to, and is indicative of, the real depreciation of the paper — that is, the advance of general prices above the level at which they would be under a gold standard. Such is tolerably certain to be the case when things have settled down; then the specie premium conforms to the price level; and, as is proper in this sort of inquiry, we start our hypothetical analysis with a settled state.

Suppose now that a new factor enters into the trade between the two countries. Let it be heavy borrowing by the United States — what is called an export of capital from Great Britain. Sundry individuals or corporations in New York borrow heavily in London and are entitled to receive funds from London. What will be the consequences upon the foreign exchanges and the course of international trade?

The first result will be a larger offering of bills on London in the New York foreign exchange market. This is the necessary consequence if the tenor of the particular transactions, or of any part of them, is such that the New York borrowers are given the right to draw upon the London lenders and therefore have sterling exchange to sell in New York. It is conceivable, of course, that the tenor of all the transactions should run the other way; that the London lenders should engage to transmit to New York, and that the first step in the series would be taken in the London market alone. Then all the London lenders would appear in that market as demanders of New York exchange. The effect of the two sorts of transactions, of course, soon becomes almost identically the same.[1] For the purposes of the

[1] As a matter of fact the transactions between London and New York usually take place in the way first mentioned, that is, in the New York market for sterling exchange.

present discussion the simplest mode of dealing with the problems is to suppose that half the transactions take place in the one way and half of them in the other. One-half then result in a demand in London for New York exchange in greater quantity than before; the other half result in the offer of sterling exchange in New York in greater quantity than before.

Sterling exchange consequently goes down in price in New York. More bills are offered; by supposition there is nothing to change the conditions of demand; sterling exchange must fall. But sterling exchange runs parallel to the specie premium and indeed may be the sole indication of the existence of a premium. It means the same thing as command over gold. Not identically the same thing, of course. Sterling exchange is not equivalent to an *immediate* supply of gold, deliverable at once; it means a supply available for delivery within a fortnight or so.[1] There may be the same divergence between sterling exchange and the gold premium which there may be under normal conditions between sterling exchange and gold parity. This cause of divergence, presumably of slight quantitative importance as compared with the gold premium, may be neglected for the purpose of the present inquiry. Substantially, sterling exchange means gold, and a fall in sterling exchange means a fall in the specie premium.

This consonance between foreign exchange and the specie premium, it need hardly be remarked, appears with exactness only under normal commercial and financial conditions. It is not to be looked for when imports and exports take place irregularly and uncertainly, and when the flow of specie from country to country is interrupted. Under such conditions, for

[1] The period was at least a month before the permanent establishment of cable communication.

example, as have existed in Germany during the last year or two (1915–16), it would be unwarranted to use foreign (gold) exchange as a certain indication of gold premium and paper depreciation. True, Germany, like most of the warring countries, is on a paper basis. Under ordinary conditions, in a paper-using country, exchange on a gold standard country means a command of gold at an early date and with insignificant transportation expense. But obviously this is not the case with Germany at the present time. The interruption of trade is so complete that in Berlin exchange on the United States, for example, means a very uncertain command over gold. The same is true, tho with a less degree of uncertainty, of Scandinavian and Swiss exchange. And the situation is similar as regards mark exchange in New York. Under normal conditions of international trade the holder of a bill on Berlin would have the option of sending his bill to Germany, buying German goods, and bringing the German goods to New York for sale. His bill would be convertible not indeed into German gold, but into German goods, and its value in New York would depend upon the prices at which he could buy goods in Berlin and sell them in New York — in other words, on the price levels in the two countries. But nothing of this sort is to be predicated under existing conditions. Goods cannot move from Germany to the important gold-using countries, just as gold cannot move from these countries to Germany. Foreign exchange in Germany is not now subject to the steadying influence of the ordinary operations of international trade.

Hence the present situation in Germany differs radically from that of the United States during the paper money period, or of Chile at the present time. With a free market for gold and for commodities, we may

assume confidently an almost exact parallelism between foreign exchange and the price of gold. Indeed it is immaterial whether the paper price of gold be quoted directly at all — as it was, for example, in the New York gold room from 1862 to 1879. The quotations of foreign exchange tell the tale; they register the depreciation of the paper in terms of gold. Under such conditions as now prevail in Germany, on the other hand, foreign exchange is by no means a certain gauge of depreciation even in terms of gold. There is, of course, no quoted price of gold; public sentiment and legal prohibition are both potent to prevent any one from overtly selling gold for paper at a premium. But even if this were done, the gold premium might readily show a marked divergence from the quotations of foreign exchange. A paper money régime is perhaps to be described in any case as abnormal, in the sense that it brings unusual forces to bear on foreign exchange and international trade; but such a situation as now obtains in Germany may be characterized as *abnormally* abnormal, in that the entire mechanism of trade between nations has broken down.

Other countries of the Continent — Austria, Italy, Russia — are in a similar situation; Germany simply offers the most conspicuous example. In France foreign trade doubtless is not so radically different from that of peace, yet is far from normal. Even in Great Britain, tho specie payments are not overtly suspended, the movement of merchandise, and of gold and the course of foreign exchange, are by no means those of a free market.

This, however, has been digression. We are concerned here with the comparatively simple case of paper money and distorted foreign exchange under a continuance of peaceful and regular international dealings.

The main thread of the argument may be resumed: what is the effect of borrowing operations, not only on foreign exchanges and the specie premium, but on imports, exports, the course of prices in the trading countries?

A fall in sterling exchange in New York, and a corresponding fall in the specie premium, mean a fall, next, of the prices of exported commodities — that is, of their paper prices. These commodities depend upon the foreign market, where they are sold in gold. The gold prices are translated into the current paper prices — the effective yield to the American sellers — through foreign exchange and the specie premium. A decline in the gold premium means a fall in the current paper prices of exports. The same circumstance obviously affects the imports in precisely the opposite way. Sterling exchange is cheaper, and imports are more easily paid for. The tendency of the chain of operation is to make exports from the United States less profitable than before and imports into the United State more profitable.

Further, the proximate effect is that the specie premium falls as compared with the general price level. In the stage of stable equilibrium which we assume to exist at the outset, the specie premium is in accord with the real depreciation of the currency. It is now less; the price of gold is lower as compared with the general enhancement of prices. And the same is true of the prices of exported commodities. They are no longer raised in price by the inflated currency conditions to the same extent as commodities in general. Tho higher in price because of the paper money régime, they are not higher in price to the same degree as commodities in general. Relatively, their prices are lowered.

A distinction must be made (and borne in mind) between two different sets of circumstances or factors,

which affect the specie premium and the foreign exchanges in different ways. They may be designated for convenience as "extraneous" and "inherent." "Extraneous" circumstances are those which have their origin outside the ordinary merchandise transactions of international trade; international borrowing, for example. These cause fluctuations — a rise or fall, as the case may be — in foreign exchange and in the premium, and merchandise movements are affected as a *result* of the fluctuations. But these merchandise movements may fluctuate from "inherent" circumstances, and the fluctuations then act as *causes* affecting the premium and the exchanges. Suppose, as an example of this second situation, an unusually large crop of American wheat and consequent large sales of wheat for export. Sterling exchange is offered in greater quantity than before, and declines; the specie premium also declines. Other exports of merchandise (e. g., of wheat) are of course depressed and checked. But wheat may be a dominant article of export, and its export sales may be so large as to be the cause of a marked decline in exchange.

An "inherent" factor may act either to reënforce an "extraneous" one, or to neutralize it. There may be large offerings of sterling exchange by American borrowers at the same time that American wheat exporters are selling their wheat bills. Or on the other hand there may be a scant wheat crop and therefore an unusually small offering of wheat bills in the foreign exchange market, while the deficiency is yet made up by the bills of American borrowers. Then exchange (with the specie premium) will move on an even keel. In the present discussion it is the extraneous circumstances that we are considering: not in what way variations in merchandise imports and exports will affect foreign exchanges, but in what way *other* than merchandise transactions will

affect it, and then will exert an ulterior influence on the merchandise movements themselves. And, to repeat, we are isolating these extraneous causes, endeavoring to ascertain what effects they will have if allowed to operate undisturbed.

The converse set of shifts to those described above appears, of course, in London. Recalling our supposition that half the transactions take place through remittances which London lenders make to New York borrowers, we find in London a greater demand for New York exchange than there was before. New York exchange rises. The British exporters — those who have sold goods to American buyers and who have exchange on New York to sell — get more for their bills. On the other hand, those Englishmen who have made merchandise purchases in New York and who by the terms of the transactions are called upon to make remittances to New York, must pay more for their bills; they are in the same situation as the lenders themselves, who have also to make remittances to New York. British exporters to the United States find business more profitable than before; whereas those in Britain who are importing from the United States find business less profitable than before.

Thus there develops a stage which is indeed, as will appear presently, only a transition stage yet may last for a considerable period. During its continuance exporting industries in the United States are discouraged, and importing operations are encouraged. In Great Britain imports are discouraged, exporting trades flourish. There arises a bounty, as it has been called, upon exports from Great Britain to the United States, and a burden on exports from the United States to Great Britain. The handicap in both countries is greater than it could possibly be under a specie system.

It is the consequence of the fall in the price of gold in the United States — its fall relatively to commodity prices. I say relatively, for it is quite conceivable that the specie premium in fact should rise, if during the same period the issues of paper money happened to be swelling so that all prices should be on the upgrade. But under the supposed changes in international payments, the specie premium, even tho it should rise, would rise *less* than general prices, and would be less than the real depreciation of the paper. And if by chance the paper issues happened to be shrinking, and if the general drift were a lowering of prices, the specie premium not only would fall, but would fall *more* than the general price level.

It will be observed that a " bounty " on exports from Great Britain is here supposed to ensue; a bounty, that is, on exports from the gold standard country. In many discussions of the problems of dislocated exchanges, whether in relation to silver-using or paper-using countries, it is supposed that the bounty is always on the exports from the silver or paper countries and operates always to stimulate shipments of goods from them to the gold standard countries. There is no logical ground for any such general statement. The influence on commodity movements in any event is a transitional one; it is due to the divergence between general prices on the one hand, and the price of foreign exchange and gold on the other. And during the time for which the divergence lasts — very likely a considerable time — it may run either way, and may stimulate or depress exports. It operates to promote exports from the country which has payments to make.

Some of the confusion or misapprehension on this subject arises from a confusing use of the terms " creditor " and " debtor " countries. A lending country is

supposed to be also a creditor country, in the sense that it has a balance to receive, a balance of remittances to be made to it. As a matter of fact, a lending country may be in just the opposite situation. Indeed, the proximate effect of lending obviously is that the lenders have remittances to make to the borrowers. The "creditor" country becomes, in the first instance, a debtor in the international account. Only in the long run does it become a creditor in the sense of having a balance of remittances to receive — after a prolonged period of lending and an accumulation of interest payments on consecutive and continued loans. And the "bounty," for either sort of situation, arises not from the mere fact of a balance of remittances one way or the other, but from a transition stage in the working of the mechanism. It is effective only so long as general prices and the specie premium (foreign exchange) are out of gear with each other.

A word more on another aspect of the "bounty" from dislocated exchanges. The mere issue of paper money has been often spoken of as causing a bounty on exports from the paper-using country. It has no such effect unless it influences the prices of export commodities *more* than the prices of other things — domestic prices and money wages. This may indeed happen. An increase in the supply of money — whether specie or paper — does not necessarily or even probably affect all commodities and all money incomes alike and simultaneously. It has confused and irregular effects, depending on the individuals into whose hands the added money first comes, and the directions in which they spend it. It may conceivably affect exported commodities more or less than others; and on this more or less depend the immediate consequences in international sales and remittances.

The case we are here examining is of course a different one — not an increased issue of paper money, but a change in international payments under a supposedly stationary volume of paper. The proximate consequences then are to be predicted more readily. There will be, to repeat, a transition period during which a "bounty" arises on exports from the country having the remittance to make — the lending or creditor country; and there will be a similar bounty on imports into the borrowing country, that is, the country to which a remittance has to be made. The bounty will not be permanent; it will cease when the transition period is over.

II

We may proceed now to a consideration of the difference between the immediate or transitional effects and the ultimate effects. The ultimate effects are in some respects similar under dislocated exchanges to what they are under the simpler conditions of gold standard exchanges, in some respects different. It will be well first to recall the theoretic analysis of these simpler conditions and follow the course of events which would ensue if both countries were on the same (gold) monetary basis.

If both Great Britain and the United States were on a gold basis, American borrowings in London must result in a flow of specie from Great Britain to the United States. "*Must* result," — this puts the case too strongly. The flow will not necessarily take place; possibly there will be none at all. And such flow as does take place is not likely to be equal in volume, either in the very first stage or later, to the amount of the loan. And yet it can be said almost with certainty that some specie movement there will be.[1]

[1] The reasoning here assumes that neither country produces gold. If one of them had considerable gold mines, the effect would more probably be not an actual inflow of

The possible but improbable case in which there will be no movement at all is where the American borrowers use the money or credits put at their disposal in buying once for all British goods in Great Britain. It is conceivable, for example, that they are railway promoters who use the entire proceeds of the loan in Great Britain for buying rails, locomotives, bridge material, and the like. Then there will be no remittances at all from Great Britain and the United States. English commodities will go to the United States as the direct result of the transaction; foreign exchange will not be affected at all.

This sort of consequence — an immediate export of goods from the lending country — may ensue as the result either of those ordinary economic forces in which deliberate diversion of international trade plays no part, or of some conscious and deliberate policy. In modern times, and during the last decade or two on a considerable scale, there has been much deliberate endeavor in the lending countries to link loans directly with commodity exports. This has been particularly the case in France and Germany. It has been the undisguised policy of the governments in both countries, and of the great financial institutions and promoters who have been in close touch with the governments, to arrange the terms of foreign loans in such way that the borrowers shall spend at least a part of the proceeds in France or in Germany. The bankers are often representatives also of manufacturing enterprises for whose output they wish to secure a market. The governments are fairly obsessed with a determination to promote exports in every possible way — one form of that

the metal, but the cessation of exports of it that would otherwise have taken place. The conversant reader need not be told that in any endeavor to interpret the actual course of the international trade of the United States, account must be taken of the conditions which may lead to the retention in our own circulation of the domestic output of gold.

almost universal spirit of neo-mercantilism which amazes the philosophic observer. Obviously, where the loans are made not strictly for industrial purposes, but for military or naval equipment, the combination of political and economic motives acts even more strongly to link foreign loans with commodity exports. In the case of Great Britain this sort of deliberate manipulation has not played so conspicuous a part. Great Britain has been a cheap place in which to buy industrial equipment, and as a rule borrowers, when they have used their funds for buying British commodities, have done so without pressure, simply because they found it pecuniarily advantageous to do so.

In all such cases, the effect of international borrowing becomes direct. The merchandise movement and the balance of trade are affected at once. Merchandise exports from Great Britain exceed merchandise imports without any intermediate stage of disturbance of the foreign exchanges, and without any flow of specie and readjustment of prices. The balance of trade becomes at once "favorable" to the lending country, and "unfavorable" for the borrowing country.

But it is extremely rare that the purchase of goods in the lending countries by the selfsame foreigners who contracted the loan takes place to such an extent as to obviate completely the flow of specie. (We are still sidering, be it remembered, what happens if both countries are on a gold basis.) Not the entire proceeds of loans are likely to be spent in this way; only some fraction. Even if railway promoters from the United States, or Canada, or Argentina, who borrow in England, also buy in England railway material, they are likely to use in this way only a part of the funds. Something they must spend at home, for labor, for miscellaneous supplies, divers expenses. It is conceivable, of

course, nay probable, that they will raise some portion of their capital at home, and only the residue abroad; such at least is likely to be the case in a country like the United States. And it is then conceivable that they will use for domestic expenditures the funds raised at home, and will use the proceeds of foreign loans entirely for purchase abroad. But it is most improbable that an exact balance of this sort will be struck, even when there is a division between foreign and domestic financing. In the immense majority of cases a part of the foreign funds, and usually a considerable part, will be wanted for expenditure in the borrowing country itself. Then, to repeat, under a gold régime, the outcome must be a flow of specie from the lending to the borrowing country. Remittances will have to be made in our supposed case from London to New York; and the foreign exchanges will be affected in the manner described.

Continuing now the analysis of the chain of operations under a specie régime, it is obvious that the increase in remittances from London to New York will cause a demand for New York exchange in London. New York exchange will rise in London, sterling exchange will fall in New York. But in this situation — both countries on a gold basis — the fluctuations in foreign exchange will necessarily be confined within the gold points. Specie will flow from London to New York. Then will follow that train of consequences familiar to the reader of Ricardo and Mill. Prices will fall in Great Britain and will rise in the United States. With the fall in English prices the export of commodities from England will be stimulated, and more of them will go to the United States. With the rise in American prices exports from the United States will be discouraged, and imports correspondingly stimulated. These diverging movements — a general fall of prices

and money incomes in Great Britain, and a general rise of prices and money in the United States — will continue until an excess of commodity exports from Great Britain develops to such an extent as to meet the obligations which the English borrowers have assumed for making remittances to the United States. Then the money value of the excess of exports from Great Britain will be precisely equal to the remittances to be made from London to New York. The English balance of trade will be "favorable"; the American balance of trade "unfavorable." The balance of international *payments* will be completely adjusted; exchange in London and New York will again be at par.

Still another consequence, familiar in the orthodox analysis, should be recalled. The outcome of the whole series of changes is advantageous to the people of the United States, in that they get all imported commodities on better terms than before. Their money incomes have risen; the prices of imported commodities have fallen; as buyers of imported commodities they gain. And the converse, of course, happens in Great Britain. Money incomes and general prices have fallen, whereas the prices of commodities brought in from the United States have risen. As purchasers of American commodities, the British are less well off than before. All this is in accord with the theorem that the apportionment of the potential gain from international trade between the trading countries depends on the so-called conditions of reciprocal demand. The people of Great Britain are called upon, or rather have undertaken, to make greater remittances to the United States than before, and in order to induce the people of the United States to purchase a greater quantity of commodities, must offer them on cheaper terms. Precisely the same set of consequences would ensue if we were to assume, not inter-

national borrowing, but a mere change in the conditions of demand. If the people of Great Britain were to demand more of American wheat or American cotton than before — if their demand curve for these commodities were to shift to the right — precisely the same changes would ensue. And the outcome would be of the same kind, if Great Britain were called upon to make a remittance to the United States for any cause whatever — tourists' expenses, the payment of a war indemnity, a new American article of export.

Nothing of this sort, however, can take place — at least, it cannot take place through the operation of the same mechanism — if the countries have different currencies. Specie could not flow, for example, from Great Britain to the United States between 1862 and 1879. If it did move, it would be simply as a commodity. Gold sent from Great Britain to the United States could not enter circulation, but would be bought for use in the arts, or for sporadic payments stipulated to be made in specie. Its influx could not affect general prices. And yet we must expect that the same general cause would have the same general effect under a paper régime. Any circumstance bringing about additional remittances from Great Britain to the United States, must presumably have effects of the same kind on the terms of commodity exchange. How can the same general tendencies and general consequences appear, without the mechanism through which alone they are under normal circumstances brought about?

We have seen that the first effect of the borrowing operation — the effect during the stage of transition — is that exporting industries in the United States are comparatively unprosperous, having a range of prices for their products lower than the general price level. In other words, exporting industries decline; or perhaps

(quite as probable) they simply remain at a standstill, not responding to the growth of population and trade in the same degree as other industries. Less commodities are exported. More domestic commodities are made, or a larger share of an exportable commodity is used and bought at home. More commodities are poured into the trading mechanism of the country. And more of imported commodities also come in; since, as we have seen, the proximate effect has been to encourage importation. All told, the total volume of commodities which are bought and sold in the United States increases. The change takes place by a diminution in the exported commodities, and an increase in the physical quantities of imported commodities as well as of commodities previously exported and now consumed at home.

Note now the peculiarities of this situation. There are more commodities than before; there is no more money. (We still assume that the depreciated paper remains unchanged in quantity; in other words, abstract from the disturbing influence of further inflation or of contraction.) Then necessarily domestic prices are lower. This seems directly contrary to the theoretical analysis of the same case under a specie régime; for under a specie régime the assumed conditions will cause domestic prices to rise in the United States. Observe, however, more closely. Prices indeed are falling in the United States; but money incomes are *not* falling. The collective money income of the people of the United States is no less than it was before, being simply the resultant of a stationary supply of money. The people of the United States gain, not indeed through having higher money incomes, but through the circumstance that their money incomes remain the same and that commodities are cheaper than before.

And they gain not only as purchasers of imported commodities (this being the only gain which they would have secured under a specie régime); they gain also as purchasers of domestic commodities. In one essential respect their situation is the same as it would be under a specie régime. They are sending to foreign countries fewer commodities; their exports are less in quantity. And they are receiving from foreign countries more of imports; their imports are greater in quantity. In terms of commodities, international trade has come to be more to their advantage under a paper régime, precisely as it would have been under a specie régime. The barter — the fundamental exchange — is more advantageous to them. But the mechanism by which they secure the advantage is peculiar. The process works out under a paper régime, not by their having larger money incomes and lower prices of some commodities (those imported), but by their having the *same* money incomes, and lower prices not only of imported commodities but of domestic commodities as well.

Turn now to Great Britain. It would be superfluous to set forth the trend of events in that country with the same detail. Precisely the converse takes place. The exporting industries in Great Britain are prosperous, and capital and labor drift toward them. More commodities are made for export, and more are sent out. The importers, on the other hand, are not prosperous; less commodities are coming into the country. Money incomes remain the same. There is no flow of specie into Great Britain or out of Great Britain. But with the same quantity of money, and with less commodities in circulation, prices rise in Great Britain. Money incomes, however, remain the same. The people of Great Britain lose as consumers of the imported goods,

now more expensive; and, they lose also as purchasers of their own goods, which become somewhat higher in price, but for whose purchase they have only the same money incomes.[1]

It would seem, therefore, that the same fundamental consequences ensue under paper money as under specie, but with some striking differences. The particular factor which was isolated — loans occasioning larger remittances to the United States — causes the people of that country to gain as consumers; they gain in their commodity incomes. The people of Great Britain lose as consumers. This much is to be expected, or at least is in accord with the theoretical analysis of the same conditions of trade under identical currency bases. But the course of prices in the trading countries is precisely the opposite from that which we should expect under specie conditions. The borrowing country, the United States, which under a specie régime would experience rising money prices and rising incomes, has instead a lower range of prices, tho with stationary money incomes. Great Britain, on the other hand, should under normal conditions have lower prices and lower money incomes; yet the foregoing analysis leads one to predict higher prices with stationary incomes.

[1] Obviously, as regards the gold country, this series of consequences would extend before long beyond its own boundaries. All gold countries would be affected; some international redistribution of gold would take place, and the rise in prices equalized (or rather apportioned) between them all. In the country of paper money, however, the effect, being necessarily confined within that country's limits, would not thus be spread out. One might expect therefore that, tho doubtless too slight to be detected in the gold countries, it might be at least observed, conceivably even measured, in the paper country. But, as will presently be explained, even here direct verification of the reasoning is not likely to be secured; not only because of the crudity of our statistical material on prices, but also because of the confusing effects of other causes sure to be in operation at the same time.

III

All this may seem very much in the air. Indeed, it does belong in the higher and more attenuated regions of theoretic speculation. It is the sort of thing which many contemporary economists believe to be no better than an intellectual plaything — refined reasoning of a most abstract character, quite impossible to connect with the realities of industry and commerce. And the most ardent devotee of economic theory must admit that such consequences as have been set forth in the preceding paragraphs, and especially those about the eventual course of prices and incomes, represent the operations of very long-time forces. Obviously they all rest upon the "quantity theory" of money, or at least upon the proposition that an increase or decrease in the quantity of money is followed by a rise or fall in prices. It is not indeed material for the argument whether one holds the quantity doctrine in uncompromising form, or holds a carefully qualified version of it, or rejects it altogether. There is agreement on all hands, I believe, that an increase in the money supply is accompanied, "other things equal," by a higher range of prices, and an increase in "transactions," similarly standing by itself, by lower prices. No more need be assumed for the present purpose; the nature of the causal connection need not be discussed. Whatever it be, every one admits that the movement toward higher prices is often slow to appear, difficult to observe. Allowance must be made for credit, banking operations, changes in the ways of effecting payments, coincident changes in the volume of goods, and the like. Much more time is required for a rise in prices due to greater supply of money, or less supply of goods, than the older economists assumed. During the long period of slow spread

of the influence and all-around readjustment of prices and incomes, other forces are certain also to come into play. The prolonged and undisturbed operation of a single factor or train of factors, of the kind here under review, is most unlikely to appear in the actual world. The problem seems to be susceptible only of hypothetical solution. It is a matter of "pure theory."

And yet verification, difficult as it is, must be attempted for this analysis, as for every other. The economist, tho compelled to resort to deductive reasoning, must strive always to confirm and correct his reasoning by ascertaining how far it is in accord with the concrete industrial phenomena. Complete verification, however, is rarely possible. It cannot happen that the industrial and monetary situation of any country shall remain undisturbed, except for the one train of influences assumed, during a period long enough for the working out of the deduced consequences. Moreover, it is almost certain that the particular factor here analyzed — a change in the balance of payments — will be of less quantitative importance than others simultaneously in operation. In any event it will be so covered up and concealed by the others as to make impossible the delimitation of its separate effect. Similarly, the working of an inconvertible paper currency is susceptible of isolation and of specific observation only in the rarest of cases. No experiment in the use of inconvertible money is ever allowed to work itself out undisturbed; a fiat money situation is almost of necessity unsettled. Exact and conclusive verification of theoretic reasoning about it is impossible.

Most of all is verification unattainable with regard to the reasoning about the ultimate outcome — the peculiar changes to which attention has been directed in the relative price levels and income levels of the

trading countries, and in the terms of commodity exchange between them. Rarified analysis of this kind seems peculiarly open to the charge of being only an intellectual plaything. There is justification for the repugnance shown to it by the economists of the historical and descriptive school. Like mathematical treatment of economic doctrines, it appeals to the analytical and ratiocinative mind, but repels the person whose concern is with the world of history and of affairs. Its validity can rarely be tested by direct appeal to the facts.

The possibilities are different, however, as regards the phenomena of what has been described as the transition period — the movements of foreign exchange and of the specie premium, and the course of imports and exports, during the period immediately succeeding a particular change in the balance of payments. Here it would seem feasible to ascertain what in fact happens, and to observe whether the course of events accords with theoretical deduction. True, more than one influence may be at work at any particular time. At the very moment when borrowing operations take place, there may be also changes in monetary legislation and general monetary conditions in the country having paper money; or there may be changes in the other items of international payments, such as those for tourists' remittances or, indeed, for current merchandise exports and imports. On the other hand it may happen that international borrowing takes place upon so large a scale and for so considerable a period as to be the controlling factor. Such, for instance, has been the case more than once in the relations between Argentina and Great Britain. Such seems also to have been the case in the relations between the United States and Great Britain during the years preceding the crisis of

1873. Both in Argentina and in the United States, it will be recalled, the operations took place under paper money conditions. Moreover, they were confined in the main to borrowing in a single country, Great Britain. It would seem not a hopeless task to trace the actual course of events in borrowing and lending countries during at least the first stage, and to ascertain how far it is in accord with theoretical expectation.

This sort of partial verification, moreover, has an importance beyond its immediate range. If it appears that the phenomena, so far as we are able to trace them in detail, conform to theoretical expectation, we may feel some confidence that the same conformity exists even where they are so overlaid and confused that it is impossible to follow them one by one. Precisely such partial verification is important in many fields of economic inquiry. We must often be satisfied if we can perceive fragments or occasional connected items that have significance. Our situation is like that of the geologist or palaeontologist who discerns scattered bits of evidence, pieces them with unseen but presumptive connecting links, and so finds sufficient confirmation of a prolonged and refined train of reasoning. Or, to use a simile applicable to the methods both of economics and geology, the inquirer is in the position of one tracing a thread through a complicated web. It appears and disappears, yet shows itself repeatedly as anticipated, conforming to a suspected plan and pattern; and we are convinced that it runs through the web, even tho invisible for long stretches. Partial verification, significant and not disconnected, serves to strengthen our confidence in the validity of reasoning quite insusceptible of verification in every detail.

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THE REGULATION OF WAGES IN NEW ZEALAND

SUMMARY

Introduction: the New Zealand system not what it was intended to be, 405. — I. A court of arbitration, unlike a board of conciliation, must follow guiding principles, 407. — The New Zealand judges hesitate to state principles, 407. — Early cases, 407. — II. Existing conditions and prosperity of the industries the basis for several years, 409. — Yet a general tendency to raise wages, 415. — Cost of living little considered, 416. — III. As time went on, more emphasis on cost of living, 417. — Statistics until 1907 inconclusive, 420. — Fragmentary evidence not accepted, 422. — Informal statements by the Court of the principles followed, 426. — IV. Beginning in 1912, higher wages awarded to common laborers, 428. — A policy on minimum wages announced, 431. — V. Index numbers of prices published in 1911–14, 434. — Wages advanced as much as cost of living, 438. — VI. Change of personnel in 1913 but no change of policy, 439. — Lowest-paid workers granted some increase, 442. — No regard paid to great advance in cost of living in 1914–15, 443. — VII. Conclusion, 445.

PROBABLY no one of the members of the New Zealand Parliament who voted for the Industrial Conciliation and Arbitration Act, 1894 imagined that by so doing he was voting to take away from employers and employees the power to contract freely in their industrial relations. Nothing in the discussions in Parliament indicates that this was the intention of the framer of the measure or of its supporters. One of the latter, Mr. John Macgregor, probably one of the best-informed men in Parliament at that time, said, six years after the passage of the Act, that he was

> driven by candour to admit that the system is not in any sense what it purports, and was intended to be — a means of settling industrial disputes and strikes by conciliation and arbitration — but is rather

a system for the regulation of the industries of the Colony by means of ordinances (misnamed "awards") issued by a court of law.[1]

To say that the system of compulsory arbitration is not what it was intended to be is not to condemn it, as Mr. Macgregor admits.[2] We must study the actual workings of the system, see what it has accomplished and decide whether these results, however unexpected they have been, are worth the cost of the undertaking; measuring costs, not in money alone, but also in the effects which judicial interference has shown on industrial and social welfare.

No subject with which the boards or councils of conciliation or the court of arbitration has had to deal is so important as that of wages. Nothing is so likely to cause a strike or a lock-out as a disagreement between employees and their employer over the wages which are to be paid and the mode and time of payment. To prevent strikes or lock-outs the court has had to fix such wages in the different industries or industrial establishments as would, in its judgment, do justice to both employers and employees and thus avoid the necessity of an appeal to these crude modes of settlement. Hence the judicial regulation of wages has come to be the most important feature of the compulsory arbitration system.

I

If wages are to be regulated by the courts under the arbitration system, it becomes a matter of fundamental importance to know what principle or theory of wages will be adopted by the judges who make the regulations.

[1] J. Macgregor, Industrial Arbitration in New Zealand, Dunedin, 1903, prefatory note.

[2] Ibid., p. 9. "I do not say the act has been a failure. What I do say is that, if it is a success, it is not as that which it was intended to be, but as something quite different.

Will the competitive principle of fixing the price of labor according to the number of laborers in any given occupation and the demand for their services be adopted? Will the principle of collective bargaining be recognized and an effort made to take into account the strength of the opposing forces? Will the needs of the industry or the needs of the workers be made paramount?

The original act was silent in regard to the principle of wage payment and could therefore afford no guidance in this matter to either the boards or the court. Wages are merely mentioned in section 2 as one of the "industrial matters" which might be made a subject of an industrial agreement between employers and employees or which, in the absence of such an agreement, might give rise to an industrial dispute to be heard, on application, by a board of conciliation or by the court of arbitration.

It may be said, in passing, that when an industrial dispute is heard by a board or council of conciliation, there is no need of a statement of the principle on which wages are to be fixed. The conciliation method is by its very nature a give-and-take method. Any attempt to lay down a principle to be followed by the participants in conciliation in reference to wages or any other matter coming before them would defeat the very purpose of these conferences. Since conciliation implies an ultimate agreement between parties hitherto unable to agree, it is important that every opportunity be afforded for them to compromise their differences. Such a compromise would be unlikely if the disputants had to make a wage agreement on the basis of some principle not acceptable to both parties. In the New Zealand conciliation councils, as in the Australian wages boards, wages are adjusted in accordance with no set principle. Both sides make use of such arguments for or against an

increase of wages as are likely, under the circumstances, to carry weight with their opponents, and nothing is conceded by either side which is not necessary to prevent the conference from being a failure.

A court of arbitration, on the other hand, finds the need of some guiding principle when it faces the task of fixing the rate of wages in an industry or occupation in such a way as to avoid the necessity of a strike. Finding no guidance in the words of the statute, the New Zealand judges, as well as those in Australia, have had to decide for themselves the principle which they would follow. The Australian judges have usually stated definitely the principle which they intended to follow and have discussed their reason for adopting it with much fulness. In the published awards of the New Zealand Arbitration Court, on the other hand, we find little discussion of the basic principles of the award. Pioneers in a new field of industrial regulation, the New Zealand judges have proceeded with caution and, mindful of the effects which their awards would have upon the conduct of industry, have hesitated to announce the adoption of a principle of wage payment which later experience would prove unwise or impracticable.

In the very first cases heard by the New Zealand Court no statement was made as to the principle which was being followed, but the Court limited itself to the establishment of a minimum wage for workers in the industry as a whole or, more likely, a minimum which varied according to the occupation or to the nature of the work to be performed. This practice received legislative approval in 1898 when, by an amendment to the Arbitration Act, Parliament authorized the Court to "prescribe a minimum rate of wages or other remuneration, with special provisions for a lower rate being fixed in the case of any worker who is unable to earn the prescribed minimum."

The practice of the Court in establishing this minimum wage does not appear to have been uniform in the early cases decided. Mr. Broadhead says: "Some of the questions put by the members of the Court to witnesses would appear to show that the minimum wage is, sometimes at any rate, fixed according to what is reckoned as the average wage ruling in the trade." [1] In the case of the Canterbury bootmakers, heard and decided in 1896, the Court accepted a schedule of wages and piece rates contained in a tentative industrial agreement drawn up by the employers and employees. Furthermore, it created a general board of conciliation, composed of employers and employees in the trade, to meet annually for the purpose of dealing with all questions of wages, which was directly authorized "to alter the amount of the minimum wage." [2] Local boards of conciliation in this industry were also provided for "to arrange all matters of wages not already provided for by the general board." The plan adopted in this case, of referring questions of wages to private boards of conciliation, was not allowed to become a precedent, however. In fact, the Court soon modified this very award by abolishing the private boards.[3] Since then the Court has itself prescribed the minimum wage to be paid, altho in those cases where an elaborate schedule of piece rates had to be prepared it has usually asked the assistance of a committee of employers and employees in the trade.

[1] Broadhead, State Regulation of Labour in New Zealand, Christchurch, 1908, p. 57.

[2] Awards, Recommendations, Agreements, etc., made under the Industrial Conciliation and Arbitration Act of New Zealand, vol. i, p. 205.

[3] Clark, "Labor Conditions in New Zealand," Bulletin of the United States Bureau of Labor, No. 49 (November, 1903), vol. viii, p. 1205.

II

In the absence of any clear enunciation of the principle which guided the Court in the determination of the minimum wage during the early years, we may say that a study of the awards themselves and especially of the brief comments which sometimes accompany them indicates that for several years the Court was chiefly concerned with the problem of preserving the existing industrial conditions in the Colony and was unwilling to allow such changes in wage rates as would tend to embarrass employers in the conduct of their businesses. Indeed, this was practically so stated by Mr. Justice Williams, the first president of the Arbitration Court, who wrote to the London *Times*, as follows:

> The duty of the Court is to pronounce such an award as will enable the particular trade to be carried on, and not to impose such conditions as would make it better for the employer to close his works or for the workmen to cease working, than to conform to them.[1]

It was doubtless in line with this policy that the Court decided, in 1896, in a gold-mining case where the operators had reduced wages, that while the reduction of wages was premature, "looking to the large amount of money that was being expended by the Consolidated Goldfields Company in prospecting and opening up new ground (these being non-paying operations) the miners should consent to take a lower wage for a limited period, after which it should be permitted to reopen the whole question."[2] When, on the expiration of the period stated, the question of wages was reopened, altho a more detailed schedule of wages was adopted by the Court, no advance in wages was allowed to the class of workers dealt with in the earlier case.[3]

[1] Quoted by Broadhead, op. cit., p. 57.

[2] Awards, etc., vol. i, p. 176.

[3] Ibid., p. 183.

Of a similar tenor was the decision of the Court in an important case heard in 1901, which affected the entire Thames gold-mining district. In announcing the decision of the Court not to allow any advance in the wages paid, the President of the Court (Mr. Justice Cooper) said:

> We are satisfied that the gold-mining industry in this industrial district is, notwithstanding an increased output of gold from the Waihi mine, in a languishing and depressed condition. . . . The Court is not, in our opinion, justified in so increasing the rate of wages as to destroy, or in a great measure cripple, an industry upon which so many workers now depend for their livelihood and in which so many individuals have invested their money.[1]

The workers had urged an increase in the cost of living as a reason why higher wages should be paid, but the Court found that while some articles had increased in price during the preceding eighteen months, the evidence submitted seemed to point to the conclusion that, on the whole, the cost of living was substantially the same as it had been eighteen months before.

The emphasis placed upon considerations affecting the prosperity of the industry was not confined to mining. In several cases dealing with manufacturing industries which were heard by the Court in 1902 the same attitude was taken as that shown above. In the case of the Auckland Iron and Brass Moulders the Court refused an increase in the minimum wage (1*s.* 1½*d.* per hour) fixed by an award made in 1899. The President (Cooper) said:

> At the hearing before us, it was clearly proved that the condition of the trade at present was no better than it was in July, 1899. Indeed, the effect of the evidence is to satisfy us that the trade is, if anything, in a less prosperous condition than it was then. The union has, therefore, failed to establish a case justifying the Court in increasing the minimum wage fixed in 1899.[2]

[1] Awards, etc., vol. iii, p. 24.

[2] Ibid., p. 89.

In the case of the Wellington bookbinders the Court called attention to the low margin on which the employers were operating, owing to importations, and said:

> We have felt that any material additional burden or restriction placed upon manufacturers here will imperil the industry altogether, and that the effect will be not to give more work to local journeymen at higher wages, but to compel additional importations, and to go far to destroy an industry which at the present time affords employment to a considerable number of workers who are not technically journeymen.[1]

Outside competition was also found to prevail in the cycle manufacture and the Court said it was obliged to take it into consideration "in fixing the minimum wage of adult workers and in considering the employment and apprenticeship of youths."[2]

The case, however, which, better than any other, illustrates the consideration which the Court gave, during the early years, to the interests of the employers is that of the Canterbury Woolen Mills' Employees, in which an award was made in 1902. The workers asked the Court to substitute for the existing piece-rate system a system of weekly wages at certain rates stated in their petition. After calling attention to the fact that such a change would involve an increase of wages to the amount of £11,000 on an existing pay-roll of £25,000 per annum, the Court said that a careful examination of the wage sheets, the conditions of work and the earnings of the piece workers had satisfied it that

> no real cause for complaint exists and that these workers are well treated and well paid under the present system. . . . In dealing with an industry of this description we have to consider the interests of the industry as a whole. It it is to be successfully conducted,

[1] Awards, etc., vol. iii, p. 349. Cf. Clark, op. cit., p. 1239.

[2] Awards, etc., vol. iii, p. 554.

reasonable provision has to be made for the maintenance of the machinery and plant under everchanging conditions, and while it is the duty of the Court to see that the workers are reasonably and fairly paid for their labor, the Court has also a duty to perform to the employer, and to see that the conditions imposed are not such as to seriously imperil the existence of the industry, and so produce results which would be disastrous to the employers, to the workers and to the district. Being satisfied, therefore, that the workers generally are fairly paid under the present piece-work rates and conditions, it is the duty of the Court to maintain as far as possible the present conditions. And in this present dispute the Court must take into consideration the fact that the production of these mills have to be sold in competition with those of the other woolen mills in the other industrial districts. No dispute exists in reference to these mills, nor has the Court any power to make one award applying to the mills in the other parts of the Colony. It would be manifestly unjust for the Court to impose conditions on the Canterbury mills which would seriously hamper their business and power to fairly compete with the other woolen mills in the Colony.[1]

The inclination of the Court in its earlier decisions to emphasize the lack of prosperity of an industry whenever it refused an increase of wages led the workers, not unnaturally, to believe that the profits being obtained by certain establishments might properly be urged as a reason why increases of wages should be allowed. Mr. Justice Cooper, the judge who made most use of the prosperity-of-the-industry argument, unwittingly lent color to this belief by a statement made by him in connection with a hearing of the Tanners' and Fellmongers' dispute at Christchurch in 1901. He said to the employers: "It is quite clear that a good deal of the information upon which the union must necessarily rely to base a claim for higher wages is in possession of the other side, and that is the profits you are making on your business."[2]

This statement was followed by a request that the employers furnish him with copies of their balance-

[1] Awards, etc., vol. iii, p. 507.

[2] Broadhead, op. cit., p. 58.

sheets or other information necessary to enable the Court to tell what profits they were making. It does not appear, however, that any use was made of this information or that the books were actually called for and inspected.[1]

Any expectation that the workers may have had that under the Court's interpretation of the purposes of the act they might expect to share in the profits of successful concerns was doomed to disappointment. It was Mr. Justice Cooper himself who first repudiated such an interpretation of his own decisions. In the Thames gold-mining dispute, already referred to, the miners employed by the Waihi mining companies claimed an increase of wages on the basis of the large profits being obtained by those companies. The Court held the reason given to be insufficient and said:

> The fact that two or three companies in the district are obtaining good returns and, therefore, that the rate of wages should be based upon the profits made by the companies, affords, in our opinion, no sound reason for fixing a high rate of wages in a district where the great majority of mines are not obtaining payable returns.[2]

Much criticism of this award was expressed by the workers and their sympathizers, but even more dissatisfaction was felt concerning a similar decision rendered in 1906 in a case brought by the Dunedin seamen against their employer, the Union Steamship Company of New Zealand. This company and other New Zealand ship-

[1] Broadhead, op. cit., pp. 58–59.

[2] Awards, etc., vol. iii, p. 25. In 1907 the Court allowed an increase of wages to workers employed in the Waihi mines (ibid., vol. viii, p. 199). This was one of the first cases heard by Mr. Justice Sim after he became President of the Court. Mr. Brown, the employers' representative in the Court, protested against allowing an advance in wages, quoting the above statement by Mr. Justice Cooper as a sufficient reason why no advance should be made. He further stated that in order to make out a case before the Court the industrial union of workers which had been defeated in the former case had now split into two unions. "The effect of this division," he said, "was to enable them to single out practically the only dividend-paying company in the district" (ibid., p. 384).

ping companies had, in 1893, reduced the wages of their seamen ten shillings per month, owing to the bad times. Ever since that time the employees had been endeavoring, without success, to have their wages restored to the old level. Failing to secure the increase by the voluntary action of the company they had recourse to the Arbitration Court. As the case was presented to the Court, much emphasis was placed, by the employees, on the prosperity of the Union Company. In rendering a decision adverse to the claim of the employees, Mr. Justice Chapman said:

> The majority of the Court do not think that any substantially different circumstances are shown to have arisen since the last award, justifying an increase of wages. Evidence was given as to the prosperity of the Union Steamship Company, the chief employer in the Colony. Such evidence is usually admitted by the Court as part of the general inquiry, but the Court does not settle the wages on a profit-sharing basis, as that might, in many industries, involve the necessity of fixing a differential rate as between employers, and would certainly lead to confusion.[1]

The disappointment felt by the seamen over this award and the opinion of the Court was shared by many others. Even the Secretary of Labour, Mr. Edward Tregear, felt warranted in making it the subject of comment in his next annual report. He said: "The sailors took the view that if they did not get an increase during days of prosperity, but only suffered reductions in hard times, the position was unfair." [2]

A perusal of the above quotations from the opinions of the Arbitration Court, giving reasons for refusing increases of wages on the ground that the prosperity of the industries concerned did not warrant such increases, would naturally lead the reader to suppose that during the early years of the enforcement of the Conciliation

[1] Awards, etc., vol. vii, p. 60.

[2] Report of the New Zealand Department of Labour, 1906, p. vi.

and Arbitration Act, increases of wages were generally refused by the Court. Such a conclusion, however, would be erroneous. The general tendency during the early years of the Act was to advance wages and this tendency is noticeable in the awards of the Arbitration Court as well as in the findings of the boards of conciliation.

Mr. Ernest Aves, reviewing the operation of the Act for the first twelve years of its history, in his report to the British government, gives a list of sixty-four cases in which more than one award had been made in the same trade and in which increased wages or shorter hours (generally) had been allowed. On the other hand, there were only forty-nine cases in which more than one award had been made and in which wages and hours had been left unaltered.[1] "In the whole series of awards," he goes on to say, "there has been only one insignificant case where wages have been reduced, and two where hours have been increased."[2] Altho the advances made by the Court in those cases where an increase of wages was allowed were in most cases not considerable, they, nevertheless, do relieve the Court from the imputation that during the early years of its existence, the workers who applied to the Court for an improvement in their situation generally went away empty-handed. In addition to the cases enumerated by Mr. Aves where more than one award had been made by the Court, he reported that, up to March 31, 1907, there were one hundred and fifteen cases in which only one award had been made.[3] It is, doubtless, well within the truth to say that in the majority of these cases the minimum wage fixed by the Court was some-

[1] Report to the Secretary of State for the Home Department on the Wages Boards and Industrial Conciliation and Arbitration Acts of Australia and New Zealand, London, 1908, pp. 94–98.

[2] Ibid., p. 99.

[3] Ibid., p. 98.

what above that which some of the workers in the trade in question had been receiving.

Altho the early decisions of the Court of Arbitration granting increases in wages seldom state the reasons which impelled the Court in allowing the increases, the period was one of slowly rising prices and it soon became evident to the workers that arguments based on the increased cost of living were most likely to carry weight with the Court. Perhaps such arguments exercised more influence than the facts warranted, for, as we shall later see, the increase in the cost of living was much less in New Zealand than in other parts of the world; but the statistics which showed this to be so had not yet been collected and tabulated, and popular opinion was influenced by reports from Europe and America.

The Court of Arbitration in New Zealand has never directly declared it to be its intention to measure the wages by the cost of living of the workers. The purpose of the Conciliation and Arbitration Act was to prevent strikes, not, as in the case of the wages boards' legislation of Australia, to prevent "sweating." The first workers to take advantage of this Act were, therefore, not those in the unorganized and poorly paid trades but those already organized in strong trade unions. It was not to be supposed that the disputes originated by this class of workers and carried to the Court of Arbitration would have to do with wages insufficient to cover the cost of subsistence. An award of the Court which allowed wages only sufficient to cover the cost of living would not serve to settle a dispute between a well-organized union of skilled workers and their employers; and therefore in the early awards made by the Court no effort was made to establish a standard minimum wage based on the cost of living to the unskilled worker. The principle which governed the

Court, says Dr. Clark, was " to include in the award such terms as would probably have been included in a collective bargain between the parties thereto in case they had come to an extra-judicial agreement." Such a wage was fixed as would be, in the opinion of the Court, " a fair wage, or a ruling wage in the locality in which the decision applies." [1]

III

As time went on, several considerations led the Court of Arbitration in New Zealand to place more emphasis upon the cost of living as a standard by which to measure changes in the minimum wage established by the Court.

1. Applications for awards became more numerous from industrial unions representing less highly skilled and poorer paid workers. While the minimum wage in the case of the highly skilled workers bore no obvious relation to the cost of living of the workers, for the unskilled and for women workers it would be the duty of the Court to see that the minimum wage established by the Court was high enough to enable the worker to maintain a decent standard of living.

2. As most of the applications for awards came from the workers' unions and as a demand for an increase of wages was invariably a part of such applications, the Court naturally threw upon the applicants the burden of showing that an increase was necessary. This was especially true in the case of second or subsequent awards made by the Court to the same group of workers. When the Court has once made an award, fixing the minimum rate of wages for a given trade, and the workers, upon the expiration of that award, ask for an

[1] Clark, op. cit., p. 1205.

increase of wages, it is natural that the Court should demand the reason for altering the minimum wage. It is equally natural that in a period of rising prices the workers should plead an increase in the cost of living as a reason for their demands and if they are able to show that an increase in house rents and in the prices of such commodities as are usually purchased by them has taken place since the last award was made, it will be very difficult for employers to make a successful resistance before the Court to the demand on the part of their employees for an increase in the minimum wage.

3. Cost of living was early made use of by judges of Australian courts of arbitration as a basis for the minimum wage. Altho New Zealand judges were in no way bound to follow these precedents, the arguments by which the Australian judges defended their awards, especially the argument of Mr. Justice Higgins of the Commonwealth Arbitration Court in the Harvester case,[1] in which he laid down the principle that a fair and reasonable wage was one which provided for "the normal needs of the average employee, regarded as a human being living in a civilized community," were widely quoted in New Zealand and undoubtedly exercised influence in the Arbitration Court.

Altho cost of living may have been one of the factors involved in the wage determinations of the earliest awards, it is first mentioned in connection with an award made as late as 1902. The case was that of the Auckland carters and it was Mr. Justice Cooper who rendered the decision. He said:

> In fixing the minimum (wage) we have had regard to the cost of living in Auckland, the nature of the work to be performed for the wages fixed, and the rates already fixed in other centers. We believe

[1] Ex parte H. V. McKay, 2 Commonwealth Arbitration Reports, p. 1.

that the rates we have settled for Auckland are, compared with the cost of living in the cities of Wellington and Dunedin, where awards have already been made, fair and reasonable and justified by the evidence adduced before us in the case.[1]

The extent to which the Court would go in requiring proof of an increase in the cost of living of the workers before it would allow an increase of wages is well brought out in a decision made in 1905 after hearing a dispute brought by the miners of the Westland district. On this occasion, Mr. Justice Chapman, the President of the Court said:

In the latest awards made by the Court it has refused either to increase or decrease the wages on the evidence then brought forward. We have been asked to deal with the question upon evidence put forward by the various parties. As to this evidence it is sufficient for present purposes to say that it did not tend to show a general increase in the cost of living during the last few years, and in this respect it stands in marked contrast with evidence which we have received in other parts of New Zealand. At Reefton it was shown that there is no increase either in house-rent or board. In the case of the coal mines, we do not think that the evidence tended to show that the established tonnage rates lead to substantially different results in the way of remuneration from those which the Court had before it in making the former awards.[2]

The reference in the above quotation to the unsatisfactory evidence which laborers were likely to offer to the Court to show that there had been an increase in the cost of living clearly indicates one reason why the New Zealand Court of Arbitration, during the early years of its existence, placed so little emphasis on cost of living as a principle for determining the minimum wage. The evidence offered by the workers was for the most part personal — price quotations made from memory relative to the commodities which they had purchased or the rents paid for their houses. Such evidence could easily be matched by employers quoting

[1] Awards, etc., vol. iii, p. 82.

[2] Ibid., vol. vi, p. 33.

instances of reductions which had taken place in prices and rents, so that, as more than one judge remarked, the evidence, taken *in toto*, tended to furnish no proof as to what changes, if any, had taken place in the cost of living.

The New Zealand government made no extended study of the cost of living until 1912. But after the census of 1906 was taken, a comparison was made of the changes in wages and of changes in the prices of food since 1895, the year the Industrial Conciliation and Arbitration Act went into effect. The year 1906 was made the basis of the index numbers used. Later the figures were made to include the year 1907. The index numbers were as follows: [1]

Year	Wages	Prices of Food
1895	84.8	84.3
1896	84.3	86.1
1897	84.6	86.1
1898	88.7	87.4
1899	88.0	83.6
1900	90.4	86.0
1901	89.7	89.6
1902	93.4	105.6
1903	96.5	100.5
1904	98.6	98.5
1905	98.0	102.0
1906	100.0	100.0
1907	104.9	103.3

Except for a general upward tendency on the part of both wages and prices, it cannot be said that these figures indicate that any close relationship existed between wages and prices in New Zealand during these years. The fluctuations in one column seem to be independent of those in the other. It is probably true, however, that, taking the period as a whole, wages kept pace with prices of food better in New Zealand than they

[1] New Zealand Official Year-Book, 1908, p. 540.

did in Europe and America. It is doubtful, however, whether the awards of the Court of Arbitration can be said to have been, in any large degree, responsible for this parallel movement. The wage statistics from which the above index numbers were calculated included the wages of agricultural and pastoral laborers and domestic servants, practically none of whom was covered by court awards. Some slight effect of the awards may, perhaps, be seen in the fact that wages in manufacturing occupations increased 19 per cent between 1895 and 1905, whereas wages in general increased only 15.5 per cent during these years.[1]

Greater use was made of cost of living as a principle for determining the minimum wage by Mr. Justice Sim, who became President of the Court of Arbitration in 1907, than by any of his predecessors. The reasons for this were, presumably, the following:

1. The majority of the awards made during the first ten or twelve years of the operation of the Act had, as we have observed, allowed some increase in the wages of the workers. After a time, however, it was found that conditions within an industry and the competition which it had to meet made it unwise to make further increases of wages unless it could be established by sufficient evidence that changes in the cost of living threatened to reduce the standard of living of the workers.

2. The influence of the reasoning of Mr. Justice Higgins in the Harvester and other cases, which we have already mentioned. In a conversation with the writer in 1911, Mr. Justice Sim acknowledged that Mr. Justice Higgins had expounded more fully than had anyone else the doctrine of a living wage and said that he was in thoro agreement with the latter's exposition of the subject.

[1] New Zealand Official Year-Book, 1908, p. 540.

The first important case in which Mr. Justice Sim expressed his opinion concerning the relation which should exist between wages and the cost of living was that of the Gisborne painters heard in May, 1909. The workers had asked for an increase of wages beyond that allowed them by an award of the Court made in 1905. In denying this request, Mr. Justice Sim said:

> The union asked to have the minimum wage for painters increased from 1*s.* 3*d.* to 1*s.* 4½*d.* per hour, on the ground that the cost of living in Gisborne had increased since the last award was made. So far from this being established, the evidence went to show that the cost of a number of the necessaries of life was actually less than in 1905. Taking the case, therefore, as presented by the parties at the hearing, if any alteration were to be made in the minimum wage, it should be a reduction instead of an increase.[1]

Altho this threat of a decrease of wages was not carried out, the Court let the workers know in no uncertain language that they need expect no advances in wages unless they were able to bring proof of their necessity. The judge continued:

> Much expense and disappointment will be avoided if the executives of unions will ponder well what we have said, and if before originating a dispute they will ascertain that there is some definite and reasonable ground for asking for an alteration in the terms of an existing award, and will recognize that without some such ground it is useless to ask for any alteration. It is idle to ask, as many unions do, for an increase in the wages fixed by an existing award, and to have nothing better to offer in support of the application than the evidence of a number of workers who are prepared to say that, in their opinion, the wages asked for are reasonable. To rely on evidence of that kind is to confess that the union has been unable to find anything in the shape of fact or argument to support its case.[2]

This decision was very unfavorably received by unionists throughout New Zealand. It seemed to them to be practically equivalent to saying that under compulsory arbitration there was little hope of laborers improving their position. They were asked to abandon

[1] Awards, etc., vol. x, p. 191. [2] Ibid., p. 192.

the use of the strike and to accept in place thereof the awards of the Court. If, now, these awards granted increases of wages only when the applicants were able to prove that the increases were necessary to maintain real wages at the existing level, it was obvious that the Arbitration Court was not to be an instrument for bringing about a better distribution of wealth.

It is due to Mr. Justice Sim to say that he recognized fully the force of this criticism. In the conversation which the writer had with him, the judge said that he did not see how the Conciliation and Arbitration Act could be made an effective instrument for bringing about a better distribution of wealth. The Act assumed the continuance of the wage system. The Court, he thought, could not do more than establish a minimum wage, and he believed it was the intention of Parliament to establish by means of this minimum wage a level below which the competition of employers was not to be allowed to reduce wages. Any attempt to bring about a better distribution of wealth must be made outside the sphere of the Court and by such means as profit-sharing, coöperative production, socialism.

In harmony with its policy of requiring unions asking for higher wages to submit evidence tending to show the need of an increase, the Court, in August, 1908, refused to fix a minimum wage for general farm laborers in the Canterbury district, because the applicant union failed to furnish evidence to show that the majority of the workers were dissatisfied with existing wages. The difficulties in the way of fixing a satisfactory minimum for the thousands of workers in an industry like farming were such that the Court held that it was

> not practicable to make an award fixing the hours of work and wages for general farm hands without altering seriously the conditions under which farming is now carried on.[1]

[1] Awards, etc., vol. ix, p. 526.

It might seem, from this statement, that the Court had put the prosperity of the industry above the welfare of the workers, but this the Court did not admit. Mr. Justice Sim said:

> If a strong case had been made out for interference the Court might have been compelled to make an award on the subject, and to attempt to regulate the hours of work and wages of general farm hands. Such a case, however, has not been made out, and the Court is thus relieved from the necessity of making the perilous attempt to regulate by award the whole farming industry of the Dominion.[1]

According to the evidence given in this case, a large portion (perhaps 90 per cent) of the farm laborers lived with their employers who furnished them with board and lodging. "The question of a living-wage, therefore," said the Court, "does not arise in connection with this class of workers."[2]

The question did arise in connection with the day-workers, and the Court admitted its obligation to consider the claims of these workers. The evidence submitted tended to show that

> a large number of the farmers pay their day-laborers 7*s*. per day and upwards, while others pay only 6*s*. per day, and some as low as 5*s*. per day. We think that anything less than 7*s*. per day is not a living-wage where the worker has to maintain a wife and children, and that, so far as the day-laborer is concerned, a case has been made out for the interference of the Court. In ordinary circumstances the Court would make an award dealing with this case. The day-laborers form, however, only a small fraction of the workers employed by farmers, and we are not justified in bringing seven or eight thousand farmers under the operation of an award for the sake of benefitting a small number of day-laborers who are paid less than 7*s*. per day.[3]

Somewhat naïvely, the Court made a "recommendation" that farmers pay their day-laborers not less than 7*s*. per day and dismissed the case, feeling assured that

[1] Awards, etc., vol. ix, p. 526.
[2] Ibid., p. 522.
[3] Ibid., pp. 526-27.

"farmers will, no doubt, see the wisdom of giving effect to this recommendation."[1]

In July, 1909, the Court again refused to make an award; this time on the application of the hotel and restaurant employees in private hotels and boarding houses in Christchurch. The Court held that it was impracticable to classify the boarding houses in such a way as to fix varying scales of wages and that to require all to pay the same wages would drive some of them out of business. Mr. Justice Sim, speaking for the majority of the Court, declared that

> Even if they could afford to pay increased wages, there is no reason why they should be compelled to do so. Where, as in the present case, the workers concerned are provided with board and lodging and are paid a wage sufficient to furnish them with all other necessaries of life, there can be no question of a living-wage, and except in special circumstances, the Court ought not to attempt to regulate the wages of such workers.[2]

Mr. McCullough, the representative of the employees in the Court, entered a vigorous protest to this decision declaring that

> the Court in refusing to make an award has made it possible for employers to sweat and underpay a very large and deserving number of young men and women.[3]

A decision which, at first blush, seems to be contradictory to that just considered was reached only a few months later in the case of the Roto-Rua tourist accommodation and boarding houses, where an award was made fixing minimum wages for the various grades of employees and also fixing the hours of work. The Court itself called attention to the fact that an award had been refused in the case of the Christchurch boarding houses, but it noted the following differences

[1] Awards, etc., vol. ix, pp. 527–28.

[2] Ibid., vol. x, pp. 508–09.

[3] Ibid., p. 509.

between the two cases: the proprietors of the Roto-Rua boarding houses all catered to the tourist trade, had a recognized tariff and carried on their business under similar conditions. Hence, it was possible for the Court to make an award and the evidence presented to the Court showed the need of some regulation, of especially the hours of work. The award was limited in its application to the parties mentioned and was not to apply to most parties keeping private hotels and boarding houses.[1]

Other cases might be mentioned in which the Court has refused the demands of the workers for higher wages and has referred to its opinion in the Gisborne case concerning the tendency of the workers to submit their cases without proper evidence.[2]

While the Court of Arbitration in New Zealand has not discussed at length, in connection with its published awards, the principles which have governed its members in fixing the minimum wage, as the Australian courts have done, Mr. Justice Sim, in the above-mentioned interview with the writer, stated informally the principle on which the Court proceeded in establishing a minimum wage and the methods by which this was accomplished. In later interviews Messrs. Scott and McCullough, the representatives of the employers and of the employees in the Court, confirmed the correctness of this statement.

According to the statement made by Mr. Justice Sim, the underlying principle of the minimum wage as it was fixed by the New Zealand Court was that of a living wage to the unskilled worker. In the absence of any reliable statistical statement as to the cost of living in New Zealand, the Court considered that 8*s*. a day was

[1] Awards, etc., vol. xi, pp. 152–53.

[2] See ibid., pp. 324–25 and vol. xiii, p. 88.

sufficient to guarantee a living wage to workers in unskilled occupations. Just what these eight shillings were supposed to cover was not stated. As in most occupations not more than forty-eight hours a week were worked, this meant for unskilled workers, such as builders' laborers, carters, general laborers in metal working establishments, unskilled workers in quarries, weekly earnings of from forty-five to forty-eight shillings a week. To this minimum wage of 1*s.* an hour, which, in the opinion of the Court constituted a living wage, it was the custom of the Court to allow from 3*d.* to 4½*d.* per hour, in addition, as the minimum wage for skilled workers, the amount of the addition depending, in part, on the number of hours worked per week, and in part on the degree of skill required in the trade. The intention seems to have been to fix a minimum wage of about £3 per week for skilled workers in most trades.

These rates were awarded by the Court even when laborers presented no reliable evidence as to their needs. If higher wages were demanded, the burden of proof, as we have already stated, was placed by the Court upon the workers to show why higher rates of pay should be allowed. Such evidence as was presented, said the judge, was usually fragmentary in character, arising out of the individual experiences of the men, and was so incomplete and contradictory that the Court could make little use of it. If the Labour Department, or other governmental agency, he continued, would gather and tabulate statistics which showed what changes in wages and cost of living were taking place, the Court of Arbitration would attach much importance to such evidence. He also spoke, approvingly, of the suggestion which had been made by Sir John Findlay, at that time Attorney-General, that a permanent commission be appointed to study these changes and report on them regularly.

Both the decisions of the Court and the statements made by the members of the Court show plainly that no attempt to determine what was the cost of living in order to use it as a basis for fixing the minimum wage had been made in New Zealand prior to 1912. The Court had apparently not even conducted such inquiries as were being made at this time in Australia by Mr. Justice Higgins prior to the awards made in his court. Instead of endeavoring to ascertain these costs, the New Zealand Court had in large measure stereotyped its award wages by its insistence on 8*s*. a day as the minimum wage. Not even the employees' representative on the Court seems to have objected to the lack of flexibility which this method of fixing the minimum wage involved. His only contention, at least as he expressed it to the writer, was that the minimum wage should be 10*s*., rather than 8*s*., per day.

Altho a rigid minimum wage was fixed by the Court during these years, one should not fail to mention the fact that it was not the expectation of the Court that employers would pay the minimum wage to all the workers of the class to which it applied, nor does the evidence gathered by the Department of Labour concerning the actual wages paid indicate that such was the practice. This is a matter, however, which must be reserved for later treatment.

IV

By the beginning of the year 1912, the members of the Court of Arbitration seem to have become convinced that some concessions to the laborers in the way of slight additions to their wages would have to be made. Whether the Court reached this conclusion on the basis of evidence furnished by the workers or felt that general

information concerning the upward tendency of prices was sufficient to warrant these increases of wages, is not ascertainable from the published awards. A Commission on the Cost of Living in New Zealand was appointed this year by sanction of Parliament and made its report on August 30, 1912; but the tendency on the part of the Court to allow increases of wages had already begun before the Commission made its report. A survey of the wages paid to common laborers in the building trades will show this tendency.

Owing to its high rents, Wellington is generally considered to be the most expensive place among the cities of New Zealand for laborers to live. In 1907 the Court had fixed 1*s.* 1½*d.* per hour for a week of not to exceed forty-five hours as the minimum rate to be paid to laborers in Wellington "employed in connection with the erection, alteration or demolition of any building, or in excavating or preparing ground for the same."[1] In March, 1912, an award of the Court increased the minimum rate in Wellington by ½*d.* per hour.[2] In Auckland this same class of labor had been awarded 1*s.* an hour by the Court in 1909,[3] while in 1912 at Poverty Bay in this same district the same class of labor had its minimum wage fixed at 1*s.* 1½*d.* per hour; the Court stating that "the wages fixed by the award are substantially the wages being paid at the present time throughout the Poverty Bay district."[4] In both Wellington and the Poverty Bay district forty-seven hours were fixed as the length of the working week. In 1908 the Court had fixed the minimum wage for builders' laborers in the Wellington district outside the city of Wellington at 1*s.* per hour and for laborers employed in the construction of scaffolds at 1*s.* 1½*d.* per

[1] Awards, etc., vol. viii, p. 1004.
[2] Ibid., vol. xiii, p. 50.
[3] Ibid., vol. x, p. 469.
[4] Ibid., vol. xiii, pp. 445, 449.

hour.[1] In September, 1912, these wages were increased by 1½*d.* per hour, which maintained the existing differential between the classes. The only statement the Court made in connection with the case was to call attention to the fact that the wages had been increased.[2] It should be said, however, that this new award applied only to certain incorporated towns in the district, Napier, Hastings and Wanganui, and to the country round-about. Elsewhere in the district the former award continued in force.

Especial attention has been given to the wages of builders' laborers, because they well represent the class of workers to whom the minimum wage is intended to apply. It is also possible to follow the awards for this class of workers through a series of years without being disturbed by the thought that they may not always represent the same grade of workers.

Other workers had their wages increased by the awards of the Court at about the same time. In connection with an award made to the Wanganui drivers in October, 1912, mention was made of the fact that the Court had been allowing an increase of wages for drivers, generally, throughout the Dominion. "In the city of Wellington the increase is 1*s.* per week. In Auckland, Christchurch, and Dunedin the increase is 4*s.* per week."[3] Butchers' wages at Auckland were increased at about the same time.[4]

On the other hand, plasterers in the Northern district were denied their request for an increase of wages on the usual ground — that the union had "failed to advance any valid reason" why an increase should be made.[5]

The Court went a step farther about this time in its policy of demanding proof from workers who asked to

[1] Awards, etc., vol. ix, p. 630.
[2] Ibid., vol. xiii, pp. 606, 610.
[3] Ibid., p. 655.
[4] Ibid., p. 672.
[5] Ibid., p. 706.

have certain conditions established in an industry. To the letter-press machinists, who were asking to have wages and other conditions fixed for certain classes of their members, the Court declared it would have made provision for them

> if the Association had placed before the Court sufficient information to enable an award to be made. . . . Where the Court is asked for the first time to regulate the wages and conditions in connection with any particular branch of industry, it is necessary for the applicant to put before the Court fully and fairly the conditions in that particular branch.[1]

In November, 1912, the Court, in connection with an award made to employees of the Gisborne Freezing Works, openly announced its policy with reference to the minimum wage for unskilled laborers. The union had asked for a considerable increase of wages over those granted in 1910, when unskilled laborers had been allowed 1*s.* an hour and most of the skilled laborers had been granted 1*s.* 3*d.* per hour. The men now requested a minimum wage of 1*s.* 3*d.* per hour for the unskilled laborers. The basis for this demand was certain agreements recently entered into with the meat companies at Wellington, Wanganui, Masterton, and Patea. These agreements were made during a period of industrial unrest and strikes were threatened unless the demands made by the workers were met. Under these circumstances, the Court came to the conclusion that the agreements which had been entered into were, more or less, forced and did not represent the normal demand for labor. It, therefore, fixed the minimum wage for the unskilled laborers at the Gisborne Works at 1*s.* 1½*d.* per hour, and in doing so, took occasion to speak of the above-mentioned agreements as follows:

> Under these agreements the lowest wage to be paid for unskilled labour of any kind is 1*s.* 3*d.* per hour, and the wages to be paid to

[1] Awards, etc., vol. xiii, p. 794.

the other workers are based on this as a minimum. The highest wage fixed by the Court for general unskilled labour is 1*s.* 1½*d.* per hour, and awards with this as a minimum have been made recently in the Wellington and Taranaki districts. In the opinion of the Court, it would not be justified in treating 1*s.* 3*d.* per hour as the proper minimum for unskilled labour, and the award now made is based on 1*s.* ½*d.* per hour as the minimum for that class of labour.

The Court is in the habit of giving great weight to agreements made by the parties to an industrial dispute when it is clear that these agreements have been made voluntarily, and that employers admit that the wages fixed thereby are fair remuneration for the work in question. We are not satisfied, however, that the agreements relied on in this case are of this character. There was no information before the Court from the companies concerned as to the circumstances in which the agreements were made, but it is difficult to believe that the companies would have agreed voluntarily to fix 1*s.* 3*d.* per hour as a minimum for unskilled labour, and there is ground for suspecting that the agreements must have been obtained by pressure which the companies were unable to resist.[1]

The admission by the Court that 1*s.* 1½*d.* was a proper minimum wage for unskilled labor, with 3*d.* additional for skilled labor, shows that the higher cost of living or other conditions were regarded as a justification for a general advance in the minimum rates of pay over those which Mr. Justice Sim and Mr. Scott believed to be adequate a year before.

That the Court did not feel itself bound to take the market price of labor as a basis for a minimum wage is illustrated by the case of the Dunedin plasterers, who, in 1913, asked to have 1*s.* 9*d.* per hour fixed as a minimum wage for their occupation. The Court only allowed 1*s.* 6*d.* per hour and said:

The fact that plasterers in Dunedin are able at present to obtain a wage of 14*s.* or 15*s.* per day is not, of itself, a valid reason for fixing 1*s.* 9*d.* per hour as a minimum, and no other reason was suggested for the proposed alteration.[2]

Probably one reason for this decision was a feeling on the part of the Court that conditions in the building

[1] Awards, etc., vol. xiii, pp. 903–04.

[2] Ibid., vol. xiv, p. 50.

trades which made an extraordinary demand for plasterers were abnormal, and that the prevailing rate of wages in this occupation might not be maintained in normal times.

The upward tendency of wages continued throughout the year 1913. In September of that year builders' and contractors' laborers were awarded a minimum wage of 1*s.* 2*d.* per hour, which was ½*d.* more than the Court had hitherto allowed for this kind of work. This same allowance appears in the awards made to general laborers in other industries during the year.[1] That the Court was not acting in an extravagant manner or in opposition to public opinion in allowing this advance in wages is indicated by the fact that general laborers in Petone (a suburb of Wellington) had a minimum wage of 1*s.* 3*d.* per hour for a forty-four hour week granted to them at about this time by the borough council as a result of an industrial agreement.[2]

V

If it be conceded as an established fact that within recent years cost of living has been the factor having most influence with the Court in the determination of the minimum wage, it is important to ascertain how closely the wages awarded by the Court have followed the changes in prices of those commodities most generally purchased by laborers.

The first careful and comprehensive study of changes in the cost of living in New Zealand was that completed and published in 1911 by Dr. James W. McIlraith,[3] at that time connected with Canterbury College in Christchurch.

[1] Awards, etc., vol. xiv, pp. 634, 641, 691–92, 709, 814, 818, 824, 856, 900.
[2] Ibid., p. 1001.
[3] McIlraith, The Course of Prices in New Zealand, Wellington, 1911.

Using the average wholesale prices of forty-five commodities for the decade 1890–99 as a basis, Dr. McIlraith constructed index numbers which showed that prices in New Zealand, which in 1894, the year the Conciliation and Arbitration Act was enacted, were represented by the index number 98, were in 1910 represented by the number 103, a rise of only five points. In Europe the increase was much greater for these years. Sauerbeck's index numbers, arranged on the same basis, showed a rise from 96 in 1894 to 118 in 1910.[1] The increase in New Zealand had been almost entirely due to the change in the prices of farm products whose index numbers had changed from 98 in 1894 to 127 in 1910. Non-farm products, on the other hand, had fallen four points, or from 98 to 94.[2]

The Commission appointed to investigate and report on the cost of living in New Zealand in 1912 took the McIlraith figures as its starting point but supplemented this study with information gained from other sources. The index of wholesale prices of food-stuffs, as reported by the Commission, showed "a rise of 20 per cent between the triennal period 1894–96 and the year 1911," with the rise more marked after 1901 than before.[3] Retail prices in Auckland, including not only food but other commodities and house rents, showed a slightly higher rate of increase, but, generally speaking, this was not true throughout the Dominion. The Commission reached the following conclusion:

> After analysis of the evidence tendered to it, and as far as possible, making allowance for the change in the quality of the articles consumed, especially house-room, and for the fact that the "living" whose cost is measured is living at a uniform standard throughout the period, the Commission finds that the cost of living over the

[1] McIlraith, The Course of Prices in New Zealand, Wellington, 1911, p. 65.

[2] Ibid., p. 68.

[3] Report of Commission on the Cost of Living in New Zealand, Wellington, 1912, p. xxix.

whole Dominion between the middle and later nineties and the present day must have increased by at least 16 per cent; but the decrease in the size of the average family since the beginning of the period and the higher average income of the period must have tended to diminish the proportion which food is of the total expenditure, and therefore to reduce the real rise to a little below that figure.[1]

Early in 1914, the New Zealand Government Statistician (Mr. Malcolm Fraser) began the systematic collection of retail price statistics of food-stuffs and also the statistics of house rents in the four leading cities of New Zealand (Auckland, Wellington, Christchurch, and Dunedin). Index numbers, weighted according to total consumption and based on the average annual expenditures in the four chief cities, were prepared. The average for the five-year period 1909–13 was taken as the base, which was expressed as 1,000. Prices were collected for every year as far back as 1891, except at Christchurch where no grocery figures were available back of 1899. Separate indices were prepared for each of the three food groups, groceries, meats and dairy produce, and also for house rent, and an index number for all groups combined was also prepared. For the food groups no perceptible and steady rise in the prices is to be noted until the year 1905, since when a general upward tendency is noticeable. The rise in house rents is noticeable throughout the whole period. Taking the index numbers for the combined groups and for all four cities, we find a rise from 875 in 1899 to 1079 in 1914,[2] equivalent to 23.4 per cent. No corresponding index number for wages has been prepared and it is impossible to make an accurate and scientific comparison of the movements of prices and wages in New Zealand during these later years. We have already

[1] Report of Commission on Cost of Living, p. xcix.

[2] Journal of the Department of Labour, June, 1916, p. 492.

observed [1] that wages advanced about as rapidly as did the prices of food prior to 1907.

We are not interested in this place, however, in the movement of wages in general, but in the changes in the minimum wages established by the Court of Arbitration. Altho the Court did not put cost of living in the foreground as a reason for advancing wages during the early years of its existence, it seems probable that the gains which labor secured from the Court in the way of increased wages during these years were fully as great as the increase in the prices of those things which the laborer had to purchase. The minimum wage awarded by the Court is seldom so stated as to enable percentages to be calculated which would show the advances in wages from time to time. At times, the classification of the workers differs; at other times, the age or experience of the worker enters in to help fix the minimum. Many of the awards take the form of a schedule of piece rates. Sometimes the wages will be fixed in one award by the day, in subsequent awards by the hour; while in still other cases the size of the district covered by the award is different from that covered by the previous awards in the same occupation. A comparison of the minimum wage fixed at different times for the same class of workers, given for several occupations or industries, may serve as evidence in support of the writer's belief that for some years the advance in award wages was probably at least as considerable as the increase in the cost of living during these years.

Bootmakers throughout New Zealand received a minimum wage, awarded by the Court, of 40*s*. per week of forty-eight hours, in 1896. In 1905 the minimum was fixed at 45*s*. and the hours of work reduced to forty-five per week. Furniture workers in the Otago (Dune-

[1] Above, p. 410.

din) district were awarded 8*s*. per day in 1896 and 10*s*. in 1902. The same class of workers in Wellington were awarded wages varying from 48*s*. to 54*s*. in 1897, while in 1906 they received from 57*s*. 6*d*. to 60*s*. 4½*d*. per week. Painters in Christchurch were awarded 1*s*. per hour in 1897 and 1*s*. 3*d*. in 1905, while in Dunedin they were given 1*s*. 1½*d*. per hour in 1898 and 1*s*. 3*d*. in 1902. Tailors in the Otago and Southland districts received an advance of five shillings a week (from 50*s*. to 55*s*.) between 1897 and 1906. Tailoresses employed in factories in Auckland made a most phenomenal gain: the minimum wage established in 1897 varied from 12*s*. 6*d*. to 17*s*. 6*d*. per week, while in the year 1904 it was fixed at 25*s*. Builders' and general laborers, who represent fairly well the unskilled class, had their minimum wage fixed in Canterbury in 1900 at from 42*s*. to 48*s*. per week, and in 1906 at from 44*s*. to 49*s*. 6*d*. per week. In all the above cases, unless otherwise specified, the number of hours remained the same under the different awards.[1]

During the early years of Mr. Justice Sim's tenure as President of the Court of Arbitration there was a tendency, already noted, to refuse further advances in wages unless the workers could prove the need of such increases, and this they could seldom do to the satisfaction of the Court. In the absence of any official statistics showing the direction and extent of changes in the cost of living, the Court felt that the evidence presented was likely to be self-contradictory. Indeed, it is doubtful if there was any considerable change in the level of prices in New Zealand during the years 1907 to 1911, inclusive. The McIlraith index numbers[2] of wholesale prices and those of retail prices subsequently

[1] All the above figures are taken from the Aves' Report, pp. 94–98.

[2] Op. cit., pp. 62–69.

prepared by the Government Statistician [1] indicate little change during these years. Beginning with 1912, however, the advance in general retail prices and in house rents was marked, and continued steadily thereafter. The average index numbers for the four leading cities, taken together, were 984 for 1911, 1013 for 1912, 1037 for 1913, and 1079 for 1914.[2]

How far the Court of Arbitration was influenced by the McIlraith figures, published toward the end of 1911, and by the Report of the Commission on Cost of Living, and how far by the evidence presented in Court, does not appear from the comments published in connection with the Court's awards. Some influence was present, for, as we have already shown, beginning early in 1912 the Court allowed considerable increases in the minimum wage to unskilled labor, while it continued generally the 3*d.* to 4½*d.* differential in favor of the skilled laborers. The general practice during 1912 and 1913 was to grant an addition of 1½*d.* per hour to both skilled and unskilled laborers over and above the wages allowed in the awards of 1911. This preserved the existing differential between the classes. Occasionally, the advance to unskilled labor was as much as 2*d.* per hour. Inasmuch as the general rule in 1911 and even earlier had been to allow 1*s.* an hour to the unskilled laborers, the advances made in 1912 and 1913 amounted to from 12½ to 16⅔ per cent, which was doubtless sufficient to cover the average increase in the cost of living for the laborer's family.

[1] New Zealand Official Year-Book, 1915, pp. 765–91.

[2] Ibid., pp. 780–81.

VI

Mr. Justice Sim retired as President of the Court of Arbitration at the end of 1913, after seven years' service in that capacity. This was a longer period of service than that of any of his predecessors. His place was taken by Mr. Justice Stringer, the present President of the Court. No immediate change in the policy of the Court as regards the minimum wage was noticeable. Indeed, the new president early announced it as his intention to follow the rule laid down by his predecessor in regard to wages. In connection with an award made to plumbers and gas-fitters throughout the Dominion in March, 1914, a minimum wage of 1*s.* 6*d.* per hour was fixed for registered plumbers and 1*s.* 5*d.* for those unregistered. The Court felt it necessary to explain the increase of wages which had been allowed, as follows:

> We have thought it proper to offer some inducements to workers to qualify themselves for the higher branches of the industry, and we have, therefore, differentiated between the registered and the unregistered plumber, awarding the wages of 1*s.* 6*d.* per hour to the former and 1*s.* 5*d.* per hour to the latter. The wage of 1*s.* 5*d.* is conceded on the basis of the voluntary agreement on the part of the master plumbers of Auckland to pay that rate. If the agreement had not been made, we should probably have fixed the wage of the unregistered plumber at 1*s.* 4½*d.*, that being the rate arrived at by the Court, after consideration of many cases extending over some years, as the reasonable minimum wage for skilled workers, which was to remain until it was satisfactorily established that the conditions of the trade had so altered as to render some modification desirable and proper.[1]

This statement by the Court was practically equivalent to an announcement to employers that they need not concede to their skilled workers, either by means of an industrial agreement or through the medium of the

[1] Awards, etc., vol. xv, p. 156.

Conciliation Councils more than 1*s.* 4½*d.* an hour as a minimum wage, because the Court would support them in such a stand. Furthermore, the awards of the Court since that time show a determination to adhere to the 1*s.* 4½*d.* rate. The minimum wage for men employed as pressers or in other capacities in the tailoring trade at Auckland, at weekly rates, was fixed at £3 per week, "to bring them into something like conformity with the other skilled trades."[1] The last award made in this industry in this same occupation had established £2, 10*s.* per week as the minimum wage for this class of work.[2] A new timber workers' award made in the northern district in May, 1914, readjusted wages of all classes of workers, generally allowing 9*s.* per day to those workers who had received 7*s.* 6*d.*, 8*s.* or 8*s.* 6*d.* per day by the award of April, 1911, and allowing correspondingly higher wages to the men who had been awarded 9*s.* or more per day by the award of 1911.[3] These changes also were said to have been made for the purpose of bringing the wages "in conformity with the minimum rate of wages ruling in other industries for the lower paid workers."[4]

Among recent awards[5] where the 1*s.* 4½*d.* rate per hour has been fixed as a minimum for skilled workers may be mentioned those made to the boiler makers, engineers, boat builders, picture framers, and wire mattress makers, flour mill employees and the canister workers. All these awards were made in 1915. In the case of certain seasonal trades, such as the building trades, or where certain exceptional conditions prevailed the minimum rate for skilled workers has been made as high as 1*s.* 6*d.*, 1*s.* 8*d.*, or even 1*s.* 8½*d.* per hour.

[1] Awards, etc., vol. xv, pp. 298, 302. [2] Ibid., vol. xii, p. 681.
[3] Ibid., vol. xv, pp. 508–09; vol. xii, pp. 199–200.
[4] Ibid., vol. xv, p. 510.
[5] Ibid., vol. xvi, pp. 228, 259, 307, 312, 322, 166, 289, 338, 419, 531, 670, 717.

For the unskilled workers, the uniformity in the minimum wage in Mr. Justice Stringer's Court is less complete. The general tendency throughout 1914 and 1915 seems to have been to maintain the 1*s.* 1½*d.* hourly rate in most trades using this grade of labor.[1] Occasionally the rate has been made 1*s.* 2*d.*[2] or, in Wellington, 1*s.* 3*d.*[3]

In some of the recent awards the Court, while refusing to raise the minimum wage for skilled laborers, because of industrial conditions due to the war, has felt itself under the necessity of granting some increase to the lowest-paid laborers. Thus, in the case of the Canterbury metal workers' assistants, heard in June, 1915, the Court made some increase in wages and said:

> Although the Court was unable to increase the higher wages being paid to the skilled workers in the engineering trade, it has felt that the lower-paid assistants in that trade were entitled to some increase, having regard to the fact that their minimum wages have remained stationary for some years, while, on the other hand, cost of living during the same period has materially increased.[4]

The minimum rates for the laborers were made ½*d.* per hour less than the rates fixed a few months before at Wellington, presumably because of the differences in house rents in the two places.

In the case of the Wellington flax mills' employees, heard in August, 1915, the Court decided that industrial conditions due to the war made it inexpedient to raise the wages of the skilled workers. In the case of the unskilled, however, the Court said:

> The minimum wage fixed by the existing award for the lowest-paid workers was, however, quite inadequate to provide them with a

[1] Awards, etc., vol. xvi, pp. 335, 579, 717. [2] Ibid., pp. 406, 444.

[3] Ibid., pp. 91, 444. In the Wellington case the Court, in speaking of the increase of the minimum wage by 1*d.* more than it usually awarded gave this warning to workers: "This must not, however, be regarded as establishing a standard wage for similar workers in other parts of the Dominion, as the increase is granted owing to the exceptionally high rents which workers in this district have to pay for suitable dwelling-houses." [4] Ibid., p. 337.

reasonable living-wage, and this the Court has substantially increased, altho it has not brought it up to the rate generally fixed for unskilled labour in other industries.[1]

The lower-paid shop assistants in the Wellington retail soft-goods trade received an increase in the minimum wages in September, 1915, altho for the trade in general the Court thought it an inopportune time to make any substantial change in wages paid, since the trade

will inevitably be prejudicially affected by the lessened spending-power of the people, consequent upon the increased taxation which will have to be imposed to meet the heavy charges upon the Dominion in connection with the war.[2]

A similar policy was followed in the case of the Wellington Stationary and Traction Engine Drivers.[3]

While these recent awards show that the interests of the lower-paid workers have not been neglected by the Court, the increases of wages allowed have been inconsiderable and have probably not been more than the workers, if organized, could have secured without the aid of the Court. Indeed, in some instances they have been less, as is shown by the results of several industrial agreements recently made. The Court, in its awards, has adhered pretty closely to the 1*s.* 1½*d.* rate for an hour's work in the case of unskilled labor. Occasionally it has allowed 1*s.* 2*d.*, and in the city of Wellington, 1*s.* 3*d.* On the other hand, the Auckland Builders' Contractors' and Industrial Workers' Union has recently secured by means of an industrial agreement a minimum wage of 1*s.* 3½*d.* per hour,[4] and the general laborers employed by the Gisborne Borough have received, by agreement, 1*s.* 3*d.* per hour.[5]

It will be noted that after Mr. Justice Stringer became President of the Court no advances were made in the

[1] Awards, etc., vol. xvi, p. 431.
[2] Ibid., p. 487.
[3] Ibid., p. 700.
[4] Ibid., p. 796.
[5] Ibid., p. 649.

standard minimum wage for either skilled or unskilled workers, at least during the years 1914 and 1916.[1] Advances were made, as already noted, in certain trades and occupations but these were, as the Court said for the purpose of bringing these wages " into conformity " with wages in other trades.

This failure to advance the standard minimum rates is all the more remarkable in view of the notable increase in the cost of living which took place during the years 1914 and 1915, as shown by the reports of the Government statistician. The movements of retail prices of groceries, dairy produce, and meat [2] as shown by the statistical reports from twenty-five representative towns, and weighted according to the population of these towns, is shown by the following index numbers of all groups, taken collectively. It will be remembered that the base 1000 is the average for the five-year period, 1909–13.

1914	1915	1916
March, 1063.	March, 1186.	March, 1242.
June, 1077.	June, 1194.	June, 1268.
Sept., 1098.	Sept., 1203.	Sept., 1282.
Dec., 1146.	Dec., 1238.[3]	

The weighted index number for house rents, collected by the new method adopted by the statistician, showed a decline during these years, being 986 in March, 1914, 965 in March, 1915, 964 in March, 1916, and 912 in September of the same year.[4] It will be noted that the decline in rents did not compensate for the advance in the prices of food-stuffs. The Government statistician says that " about 50 per cent of the expenditure [of the

[1] The awards made during the year 1916 have not yet reached me.

[2] A change in the mode of collecting the statistics of house rents makes it undesirable to include them with the other figures.

[3] Journal of the Department of Labour, November, 1916, p. 596.

[4] Ibid.

typical household] is upon food and rent." [1] As indicated in the Table, the percentage of increase in the price of food between July, 1914 and October, 1916 has been 20.47 for the whole Dominion,[2] which, according to Mr. Fraser, represents a rise of 24.31 per cent in the typical household budget of the working class.[3]

Mr. Justice Sim had said that the Court of Arbitration would attach much importance to statistics collected by the Government showing the trend in the cost of living, but it does not appear that the Court, under the presidency of his successor, made much use of such evidence during the years 1914–15. Possibly the Court feared to make a change in the rates of wages while the war was in progress, because the advance could not be sustained when the war closed. Viewing the matter from this distance, and frankly admitting our ignorance of the conditions disclosed at the hearings of the cases which have arisen, it does not appear what justification, if any, there has been for the failure on the part of the Court to advance the minimum wage, both for skilled and for unskilled labor, since the outbreak of the war. While the war has undoubtedly disturbed the normal operations of business, New Zealand is said to be enjoying unusual prosperity, due largely to the unusual demands for her products in the countries engaged in war. Greater steadiness of employment has doubtless come to the rescue of the worker and may have prevented a lowering in his standard of living even with a steady advance in retail prices. But if this is the explanation of the Court's failure to advance the minimum wage, it means that, according to that tribunal, the employing classes alone are to keep all the gains that come from a rise of prices.

[1] Journal of the Department of Labour, May, 1916, p. 209.

[2] Ibid., November, 1916, p. 600. [3] Ibid., p. 593.

VII

Our review in the preceding pages of the regulation of wages by the Court of Arbitration of New Zealand leads to the following conclusions:

1. The Court, having little or no guidance from Parliament, has limited its work in regulating wages to prescribing a minimum wage for a given class of workers, usually distinguishing between the skilled and the unskilled in each industry or occupation, but making no effort to determine the exact wages to be paid to those workers who are worth more than the minimum.

2. During the early years of its existence the Court made no statement of the principles according to which the minimum wage was determined but, while allowing many increases of wages, it seemed inclined, prior to 1907, to give chief consideration to the ability of the industry to support increases of wages under the existing competitive conditions.

3. While giving such consideration to the profits earned by an employer as tend to show his ability to stand increases of wages, the Court has steadfastly refused to fix wages on a profit-sharing basis.

4. Altho cost of living was not taken as a principle for determining wages prior to 1907, wages seem to have kept pace with advances in the prices of food prior to that date.

5. Cost of living was definitely adopted as the principle for determining the minimum wage in 1907 and thereafter. The Court adopted a standard minimum wage of one shilling per hour for unskilled labor and fixed the minimum wage for skilled workers at from 3*d.* to 4½*d.* above this amount. The burden of proof to

show that a higher minimum was needed was placed by the Court upon the laborers.

6. Cost of living increased very little in New Zealand between 1907 and 1911 and during these years few changes were made in the minimum rates fixed by the Court at the beginning of this period.

7. A rapid increase in the prices of food and in house rents took place during the years 1912 and 1913, and the Court advanced the minimum wages of both skilled and unskilled workers to keep pace with the increase in the cost of living.

8. The advance of prices continued during the years 1914 and 1915 and this upward movement was greatly accelerated by the war. The Court of Arbitration, apparently because of war conditions, allowed few increases of wages, and they applied almost exclusively to the unskilled workers during these years.

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THE LITERACY TEST AND ITS MAKING

SUMMARY

Noteworthy provisions, other than the literacy test, in the act of 1917, 448. — The literacy test itself significant of a change in public opinion, 449. — The earlier acts aimed at selection only, 451. — The literacy test a measure of restriction, 452. — The bill of 1897, vetoed by President Cleveland, 453. — Speaker Cannon's successful manœuvers against a similar bill in 1906, 455. — President Taft's veto of 1913, 456. — President Wilson's veto of 1915, 459. — The act of 1917 finally passed over the veto, 459.

"THE opinion which changes the law is in one sense the opinion of the time when the law is actually altered; in another sense it has often been in England the opinion prevalent some twenty or thirty years before that time; it has been as often as not in reality the opinion not of today but of yesterday." Thus does Mr. Dicey sum up one of the features of law-making in that country; and he intimates that in the United States, the very home of democracy, the situation is not different.[1] Of the truth of this proposition there could scarcely be a better illustration than is furnished by the history of immigration legislation in this country, and in particular the history of the literacy test.

The amount of public attention claimed by the literacy test in the last few years, and the uniformity with which its enactment is recognized as marking an epoch in immigration legislation, are remarkable. So completely has this feature of recent immigration bills engrossed the public mind as to obscure the fact that

[1] A. V. Dicey, Law and Public Opinion in England, pp. 7, 32.

each of these bills has been a general codifying act, embodying all that was best in previous legislation, and introducing a number of changes, some of them of wide scope and great importance. Thus the measure which became law on February 5, 1917, contains, in addition to many changes in the administrative features, noteworthy new provisions. The head tax is raised from $4.00 to $8.00, and children under sixteen, accompanying father or mother are exempted. The excluded classes are enlarged by the addition of persons of constitutional psychopathic inferiority (a phrase which has occasioned much hilarity on the part of the opponents of the bill), persons with chronic alcoholism, vagrants and stowaways; and the provisions regarding exclusion of polygamists, anarchists, and mental defectives are strengthened. The prohibitions regarding the stimulation of emigration are made more strict and explicit. Orientals (with the exception of Japanese, already excluded by the "Gentleman's Agreement") are excluded by a geographical delimitation. The fine imposed upon transportation agencies for bringing inadmissible aliens is raised from $100 to $200, and an additional sum, equal to the amount paid by the alien for his transportation from the initial point of departure, is exacted from the transportation company, to be returned to the alien. Provision is made for the placing of inspectors and matrons on immigrant carrying vessels. Arriving aliens are required to make a statement under oath regarding their purposes and intentions in coming. The ordinary period of deportation is raised from three years to five years, and the deportable classes are enlarged, particularly by the inclusion of aliens convicted of crimes and sentenced to imprisonment of one year or more. It is made impossible for a sexually immoral female alien to avoid deportation by

marriage to an American citizen. Provision is made for the deportation of aliens to the country from which they came, as well as to the port of embarkation. An elaborate set of provisions is established to prevent inadmissible aliens from entering illegally by means of enrolment in a ship's crew. Numerous other changes are made in the direction of increasing the responsibility of transportation companies and enlarging the fines and penalties.

The foregoing modifications by themselves would make the act one of the highest importance. To understand why, in the popular mind, the literacy test has so completely overshadowed all these other features it is necessary to have in mind an outline of the general history of immigration legislation in this country.

The initial attitude of the people of the youthful United States respecting the question of immigration was one of easy tolerance bordering on indifference on one side, and frank welcome on the other. In some regions immigrants were eagerly desired, and positive efforts were made to attract them; nowhere was there any well-defined antipathy toward the immigrant as such, nor any apprehension as to the effects of his presence in the country. This state of mind is easily comprehensible. On the one hand, the country was large and new, natural resources seemed unlimited, and the western bounds of settlement appeared indefinitely remote. On the other hand, the volume of immigration was slight, and those who came were for the most part closely allied in race and customs to those already here.

This attitude persisted well into the nineteenth century. In fact, with the beginnings of a national industry, and the development of internal transportation systems, the demand for foreign labor began to be more

keenly felt, and immigration increased in response. It is not until about 1830 that there can be detected any well-marked current of thought opposed to the immigrant. From that date, however, objections to unregulated immigration became increasingly frequent and emphatic. These objections were all based on one common ground — the poor quality of the immigrants. With the exception of an occasional clear thinker, there was scarcely a notion of the possible dangers from the mere numbers of immigrants, regardless of their quality. The main defects observed in the existing stream of immigrants were four in number, criminality, disease, pauperism, and Roman Catholicism. While it is probable that the last of these considerations outweighed all the others among the motives which led to the formation of the Native American and Know-Nothing parties, yet for obvious reasons it could not receive full and frank expression, and in the anti-immigration agitation of the thirties, forties, and fifties particular stress was laid upon criminality and pauperism. One of the chief objects sought in this agitation was the assumption by the Federal government of the control and regulation of immigration. Petitions and memorials to this effect poured in upon Congress in shoals. But Congress could not be induced to take any steps in the direction of limiting immigration. The only Federal laws passed during this period had to do with the regulation of shipping conditions and the safeguarding of the lives and health of the immigrants, and were therefore in the nature of encouragement, rather than of limitation. Various states made attempts to exclude the manifestly undesirable, but these were rendered largely ineffectual by the rivalry among the states for good immigrants, and the repeated decisions declaring all such measures unconstitutional.

The Civil War and the concurrent cessation in immigration put a check to anti-immigration agitation for a number of years, and it was not until 1882 that Congress at last took the step of placing immigration affairs definitely in the hands of the Federal government.[1] And the significant thing is that the measures adopted at this time were exactly those which had been demanded thirty to fifty years earlier. Convicts, lunatics, idiots, and persons unable to take care of themselves without becoming public charges were to be excluded. Thus when the Federal government finally consented to take charge of immigration, the legislation embodying this step was based definitely on the principle of selection, that is, the qualitative sifting of immigrants, which was just the animating principle of the agitation of the thirties, forties, and fifties. But by this time, a new immigration danger was beginning to be recognized, and a new principle of regulation was being brought to the fore. The danger was that of too large numbers of immigrants; the principle, that of restriction — numerical limitation.

Congress, however, having adopted the principle of selection as the basis of legislation, stuck to it, and for the next thirty-five years the successive immigration laws had the general effect of increasing, perfecting, and amplifying the selective tests for admission. Nowhere in the complex body of legislation which has grown out of the act of 1882 can there be found, up to the year 1917, a single provision which is ostensibly restrictive on its face, nor one which, even in practice, has the effect of materially reducing the volume of immigration. The whole aim of the laws is to keep out the undesirables.

[1] The Chinese Exclusion acts, as well as the act of 1875 excluding prostitutes and criminals, are separate affairs.

It now becomes clear why the literacy test has aroused such tremendous feeling, and attracted such widespread attention. While ostensibly a selective measure, putting the finishing touch to our classification of undesirables, it will affect so large a proportion of the ordinary immigration stream as to be really restrictive. In effect, therefore, it introduces a new principle. This feature has furnished the most vulnerable point of attack to the opponents of the bill, while it has been a more or less concealed argument in its favor on the part of its supporters. There can be no doubt that the agitation for the literacy test represents, in a very real way, the growing sentiment in favor of the actual restriction of immigration.

Where, when, and by whom the literacy test was first advocated as a legislative measure for controlling immigration is a matter of only historical interest. It began to attain prominence about the year 1890. The Joint Congressional Committee on Immigration, which held its hearings during that year, evidently had the literacy test in mind as a possible practical expedient, and its report contains testimony in favor of the test from numerous witnesses, many of them persons of foreign birth. The test was also advocated by Senator H. C. Lodge in an article in the *North American Review* for January, 1891, which was later introduced into a speech on the floor of the House. During the next three or four years the measure was included in several bills introduced in Congress, none of which attained any prominence.

In 1894 there was formed in Boston the Immigration Restriction League, which soon focussed its activities on the literacy test, and from that time to the present has been probably the most influential agency working distinctly toward this end. It was instrumental in the

formulation of the bill which was introduced in the Senate in December, 1895, by Senator Lodge, and in the House by Mr. McCall, and can claim the credit for many improvements in the immigration laws, in addition to the literacy test.

In the early part of the year 1896 there were introduced in both Houses of Congress bills to establish a literacy test. The measure passed in the House on May 20, 1896, by a vote of 195 to 26; on December 17 of the same year it passed the Senate by a vote of 52 to 10. After much discussion, and some changes in the wording of the test, the bill which finally came from conference provided for the exclusion of all persons over sixteen years of age, physically capable of doing so, who could not read and write the English language or some other language. Exception was made in favor of persons over fifty, who were parents or grandparents of a qualified immigrant, himself over twenty-one and capable of supporting such parent or grandparent; also the wife or minor child who accompanied or was sent for by husband or parent. It is noteworthy that in this bill the test included both reading and writing.

By this time, however, the bill had become something more than a measure establishing a literacy test. On the motion of Mr. Corliss of Michigan there had been added in the House an amendment, which, couched in general terms, purported to put a check to transitory immigration, or "birds of passage," but which was directly aimed at certain classes of Canadian laborers who habitually came across the border to do daily labor in the United States.

Having passed both Houses in its final form, the bill went to President Cleveland, and on March 2, 1897, was returned by him, with a long and carefully worded veto message, in which the President characterized the meas-

ure as a "radical departure from our national policy relating to immigration," which policy he believed to be justified by the prosperity of the country; he made numerous criticisms of the wording as well as the content of the bill, and objected in particular to the Corliss amendment. It has been stated on good authority that this last provision was what really determined the veto.

The House promptly passed the bill over the veto by a vote of 193 to 37 on March 3, but no time was left for action by the Senate. Probably it would not have passed that body in any case, as a change of sentiment among its members, attributed to the vigorous and active work of the steamship companies and other opponents, had reduced the Senate vote in its favor to a bare majority.

During the next few years the measure was kept before Congress, largely through the activity of the Immigration Restriction League, and received favorable votes in both Houses, but not at the same time. In the mean time, the Industrial Commission had rendered its report, which included many suggestions for the improvement of the immigration law. The literacy test was not among them, tho the Chairman and one other member put themselves on record as favoring this measure. A general immigration bill was framed to accord with these recommendations, to which the literacy test (now worded to require ability to read only) was eventually added. In spite of the fact that there was a majority of the Senate in favor of this test, such powerful opposition developed that it was finally dropped in order to save the entire bill. This bill became the act of March 3, 1903.[1]

[1] In preparing the foregoing narrative the writer has drawn freely on Mr. Prescott F. Hall's valuable book on immigration, in which many further details of great interest may be found.

The bulk of opinion in both Houses, however, remained strongly in favor of a reading test, and when the next immigration bill was framed in the Senate, provision was made on amendment for the application of such a test. The bill passed the Senate without a dissenting vote and went to the House. There another bill, known as the Gardner bill, was substituted, which did not differ materially and also contained, as Section 38, a literacy test. It was perfectly clear that there was ample sentiment in its favor to pass this test, and the entire bill. The Speaker of the House, Mr. Cannon, was, however, violently opposed to the literacy test, and used all his great influence for its defeat. Not only did he secure the enactment of a rule preventing a yea-and-nay vote upon this particular feature, but (according to the charges of the American Federation of Labor) actually left the chair, went upon the floor of the House and induced members to go into the cloak rooms or to vote against the measure. The test was finally defeated by what is probably one of the most remarkable amendments ever offered in Congress. On June 25, 1906, Mr. Grosvenor of Ohio rose on the floor of the House and moved to strike out Section 38, and insert the following: " Section 38. That a commission is hereby created . . . (which) shall make full inquiry, examination, and investigation into the subject of immigration." The amendment passed and the bill passed. In conference the Senate was induced to drop the literacy test in return for the elimination of the " Littauer amendment," a " liberal " provision added in the House, and the bill became the act of February 20, 1907.

Immediately thereafter, President Roosevelt appointed the Immigration Commission. This Commission spent nearly four years and $900,000 in the study of immigration, embodied its findings in a report which

could not be crowded onto President Eliot's five-foot shelf, unanimously recommended the restriction of immigration, and, with a single dissenting voice, agreed that the best form of restriction was a literacy test. Senator Dillingham of Vermont and Representative Burnett of Alabama, chairmen of the respective Committees on Immigration and both members of the Immigration Commission, were now the leaders in immigration affairs in Congress, and have been in charge of all subsequent immigration bills of importance.

Supported by the findings and recommendations of the Immigration Commission, bills strengthening the provisions of the immigration law, improving its administration and including the literacy test, were again introduced into Congress. In January, 1913, after a long debate and many modifications, a bill, satisfactory to both Houses and containing a literacy test, was passed by both Houses and went to President Taft for his signature. The President expressed himself as in doubt regarding the merits of the educational test and in order to assure himself in the matter held a public hearing in the White House. Finally, at the last moment, the President returned the bill to the Senate on February 14 without his signature. The veto message was brief. After the customary expressions of regret and acknowledgment of the many valuable features in the bill the President said, "But I cannot make up my mind to sign a bill which in its chief provision violates a principle that ought, in my opinion, to be upheld in dealing with immigration. I refer to the literacy test. For the reasons stated in Secretary Nagel's letter to me I cannot approve that test. The Secretary's letter accompanies this." The letter referred to is lengthy, contains an elaborate and somewhat specious arraignment of the literacy test, and

recommends distribution as a preferable means of correcting the evils of immigration. One of its most significant passages is the following: "So far as the industrial conditions are concerned, I think the question has been superficially considered," — after nearly twenty years of debate in Congress and the reports of the Industrial Commission and the Immigration Commission. Another passage bears the clear implication that if the literacy test could have been supported as a selective measure the Secretary might have approved it, but that it could not, and as a restrictive measure it introduced a principle which he could not accept. It is a fair inference that this letter was the determining factor in the President's decision to veto. Subsequently, Mr. Taft stated in a public address that he vetoed the measure because he did not believe it was a good selective test.

An attempt was promptly made to pass the bill over the veto. This was successful in the Senate, the vote being 72 to 18, but failed in the House by a margin of five votes (213 to 114).

Congress, however, had its mind thoroly made up. Before President Wilson had been in the chair two years there was presented to him an immigration bill essentially similar to the preceding one, the final votes having been 50 to 7 in the Senate, and 227 to 94 in the House. It was well understood in advance that the President was opposed to the literacy test, but his willingness to hear both sides was evinced by the fact that he followed the precedent set by his predecessor and held a public hearing in the White House. In the end, however, he also followed precedent by returning the bill without his signature (January 28, 1915). His veto message was a painstaking document, in which he referred to the literacy test as a means "to limit the number of immi-

grants by arbitrary tests" which would "reverse the policy of all the generations of Americans that have gone before." He expressed himself as willing to follow the wishes of the people, but as quite unconvinced that the bill in question represented their wishes in this particular. He queried whether any political party had ever declared in favor of such a measure and been entrusted with the reins of government — an unfortunate allusion in view of the fact that McKinley was elected in 1896 on a platform which specifically favored an educational test. He laid much emphasis upon another section of the bill which seemed to close the door to political refugees from abroad; but even more strongly he objected to the literacy test, which proposed to turn away from tests of character to tests of opportunity, and the purpose of which was "restriction, not selection." He asked that the question be embodied in party platforms and voted upon, as it was "too fundamental to be settled otherwise" — a phrase hardly calculated to soothe the feelings of a somewhat irritated Congress.

The vote in the House on the repassage of the bill over the veto was 261 to 136, another failure by a bare margin. There is little doubt that it would have passed the Senate had opportunity been given.

Again two years were consumed in carrying the bill through Congress and presenting it to the President. Soon after the middle of January, 1917, an immigration bill with a literacy test was once more in President Wilson's hands. The provisions of the test were similar to those in other recent bills, refusing admission to "all aliens over sixteen years of age, physically capable of reading, who can not read the English language, or some other language or dialect, including Hebrew or Yiddish." Exceptions were made in favor of the

father or grandfather over fifty-five years of age, the wife, mother, grandmother, or unmarried or widowed daughter of an admissible alien or citizen; also in favor of aliens fleeing from religious persecution, aliens who have resided continuously for five years in the United States and return within six months and aliens in transit. The test was to consist of reading not less than thirty or more than forty words in ordinary use, printed on a slip of paper, in any language or dialect chosen by the alien.

It was expected that President Wilson would veto this bill, and he did (January 29, 1917). This message was briefer, and much more indifferent in tone than the former one. Nothing was said this time about the wishes of the people. The unwillingness to depart from tradition or to impose tests of opportunity was reiterated. But special emphasis was laid upon the "religious persecution" clause, on the ground that its application would be likely to cause international difficulties by putting the United States in the position of criticizing foreign governments. It is interesting to compare this objection with one of the President's two chief criticisms of the earlier bill, namely, that the provisions for the exclusion and deportation of anarchists and their kind would close the door to aliens planning in this country for the overthrow of foreign governments.

The action of Congress was prompt and decisive. On February 1, the House passed the bill over the veto by a vote of 287 to 106 and on February 5, the Senate finally settled the matter by a vote of 62 to 19, making the thirty-second time that the test has passed one House or the other, the average of 14 record votes in the House being 216 to 79, and of 10 record votes in the Senate, 53 to 15.

Thus the demand for the restriction of immigration, which has been an increasing factor in our national thought for over twenty-five years, has at last found expression in a measure which ostensibly completes the selective system of admission, and for which, by all tests, the people were ready two decades ago. How long it will take to secure the passage of a frankly restrictive law, such as that urged by Senator Dillingham, or that in Mr. Gardner's new proposal, time alone can tell.

It is an interesting ground for speculation whether these repeated presidential vetoes of a measure which has received such abundant support in Congress reflect any general difference in attitude toward a question of this sort on the part of the Executive and the Legislative. Obviously the cases are too few to serve as a basis for generalization. Very probably individual factors would offer a sufficient explanation in each case. Yet it is significant that President Cleveland remarked subsequently that if he had known as much about immigration at the time as he did later, he would have signed the bill in spite of its objectionable features. Possibly a partial explanation may be that the regulation of immigration is a technical matter, and the President, having little time to inform himself, is more impressed by tradition and the superficial "liberality" of free admission than is Congress, which has ample opportunity to become conversant with the facts.

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COÖPERATION AMONG THE MORMONS[1]

SUMMARY

Introduction: importance of coöperation in the early economic history of Utah, 461. — I. Associative enterprises in colonization, 463. — Mormon colonization policy, 463. — Coöperative building of irrigation systems, 466. — Division of the irrigation water acquired, 468. — Other kinds of concerted community effort, 472. — II. Coöperative stores; causes leading up to their establishment, 473. — Zion's Coöperative Mercantile Institution, 475. — The smaller retail stores, 489. — III. Industrial coöperation. Woolen mills, 490. — The beet sugar industry, 490. — Consolidated Wagon and Machine Company, 493. — Beneficial Life Insurance Company, 494. — Hotel Utah, 495. — IV. Present status, 498.

WHEN the Mormons entered Utah in 1847, they found themselves in what they regarded as virtually a desert. Sage brush, interspersed with bunch-grass, covered the hills and valleys, leaving only a green fringe of willows, wild rose bushes, and cottonwood trees along the few small creeks. Scattered tribes of Piutes — destitute nomads — were the only inhabitants. True, the mountain scenery impressed its rugged grandeur on the pioneers, but that did not relieve the desolation of the land itself. It cannot better be described than in the words of Captain Howard Stansbury, of the United States Army, who surveyed the Great Salt Lake Valley in 1849.

> One of the most unpleasant characteristics of the whole country ... is the entire absence of trees from the landscape. The weary traveller plods along, day after day, and week after week, his eye resting upon naught but interminable plains, bald and naked hills, or bold

[1] The writer wishes to express his sincere appreciation for the kindness of Mr. John Graham Brooks, who has made numerous helpful suggestions concerning this article.

and rugged mountains: the shady grove, the babbling brook, the dense and solemn forest, are things unknown here; and should he by chance light upon some solitary cottonwood, or pitch his tent among some stunted willows, the opportunity is hailed with joy, as that of unusual good fortune.[1]

To reclaim this cheerless region, the pioneers diverted the water of the mountain streams to the parched ground, thereby being the first among Anglo-Saxon people to practice irrigation, which has later proved to be the very economic salvation of the arid West.[2] Gradually, but not without tremendous difficulties and hardships, the work of reclamation was extended and an increasing area of arable land acquired. Where formerly existed only a barren waste, now flourished thriving cities and towns; in place of the sage brush grew waving crops and verdant orchards. Nothing could be more eloquent of the industry and perseverance of the pioneers of Utah than the manner in which travelers, from 1850 to the present time, in describing their impressions of the state, have used the Biblical phrase, " made the desert blossom as the rose."

What were the economic forces which brought about this transformation — the methods used, the underlying social causes ? Too little consideration has been accorded these questions. True, the Mormon religion has received ample attention. But in all the voluminous mass of labored explanation, partisan propaganda, sincere criticism, zealous defense, confessed antagonism, and dishonest villification which constitute the literature of that subject, the meagerness of scholarly effort to understand the economic life of the founders of Utah is astonishing. " Is it not worth while," asks Professor

[1] Captain Howard Stansbury, U. S. A., Explorations and Survey of the Valley of the Great Salt Lake. Printed by order of the United States Senate, 1852, p. 129.

[2] Charles Hillman Brough, Irrigation in Utah. Johns Hopkins University Studies in Historical and Political Science, Baltimore, 1898, pp. 1–3.

Ely, in one of the initial ventures into this field, "to pass over the religious controversies connected with Mormonism and their outcome and examine into the achievements and manner of life of the Mormons, so far as these things relate to economic and social matters?"[1] Within the limits thus laid out, one phase of such activities of the people of Utah stands out as more important and significant than the others — namely, their practice of coöperation. Not only did coöperation enter vitally into the economic life of the first settlers, but it has had a most far-reaching effect on their subsequent commercial and industrial affairs. With the nature of the Mormon system of coöperation, its characteristics, effects, and present status, this article purposes to deal.

The coöperation practised among the Mormons is found to be of three kinds, each distinct from the other, but each a logical development of the preceding type. They are: first, a period of informal but nevertheless highly effective and efficient coöperation, extending from 1847 to 1868; second, the foundation and growth of coöperative stores from 1868 to approximately 1890; and third, the development of a system of coöperative industrial enterprises, beginning in 1890 and continuing until the present time.

I

If the term coöperative colonization appears at first glance to be a misnomer, it nevertheless accurately expresses the means by which the early settlement of Utah was effected. A brief survey of the Mormon policy in colonizing the territory is necessary in order fully to

[1] "Economic Aspects of Mormonism," Harper's Magazine, April, 1903, vol. cvi, p. 667.

realize the truth of this. The first great fundamental fact from which all study of the period must proceed is that the Mormons were in Utah to build a home. The settlers of neighboring states were drawn west by prospects of mineral wealth or to engage in trapping or stock raising; but the Mormons made their memorable trek across the plains in search of a permanent abode where they could remain without further molestation.[1] Hence their scheme of colonization was one of home building. The towns and villages in Utah, therefore, were not established inadvertently or by individual initiative. On the contrary, they were a result of very definite plans.

When the first settlement had been made on the shore of the Great Salt Lake, parties were immediately dispatched into the neighboring valleys to discover other sites available for colonies. If a place was approved, a group was detached from the old settlement, which migrated bodily to the new location. Having reached the designated spot, the members did not then separate, but built their log houses together, often in the shape of a fort. Thus instead of isolated individual farms, as in the Middle West, there grew up a system of compact village communities. The cause was twofold. "When the settlers first occupied the land, it was necessary for them to remain in communities sufficiently large to repel Indian attacks and it was a policy of the church to encourage the building of compact towns rather than detached ranches, thereby enabling the people to meet more often socially — an antidote for nostalgia and a

[1] "In California, in Colorado, in Nevada, in Idaho, and in Montana, mining, rather than agriculture, was the motive which induced the original settlement by Americans and irrigation grew up only as an adjunct to the mining camp. In Wyoming, . . . stock raising was the first pursuit. . . . In Washington and Oregon the first settlements were made along the humid coast. . . . But in Utah the motive was home building and the pursuit was agriculture for its own sake." William E. Smythe, The Conquest of Arid America, New York, 1905. pp. 51–52.

great assistance in maintaining interest in the church." [1] The effect of such a system was a more sensitive community consciousness, greater cultural activity, and an easier adaptability to follow leadership in a common enterprise. The leadership was ready at hand in the ecclesiastical officers, and the peculiar physiographical and climatic conditions of the new country soon demonstrated that common and united effort was essential if the people wished to survive.

In the very nature of things this first common effort had to be agricultural. The immediate need was to provide a food supply. The pioneers had brought only a meager store of provisions with them, because of their hasty enforced departure from Illinois. The hazardous journey of three months across a thousand miles of prairie precluded any reliance upon the East for sustenance, nor did the Mormons, remembering their recent experiences, wish to be thus dependent. They must feed themselves or starve. Accordingly, Brigham Young advised his co-religionists to attach themselves at once to the land and raise their own food. He exhorted them strictly not to attempt at first any mining enterprises, for he realized that as conditions then existed such pursuits would separate and demoralize the people, thereby endangering the identity and permanence and even the temporary existence of Mormon colonization.[2] As a colonizer, facing a strictly practical question, he perceived what has since been so plainly evident to the sociologist and the historian — that the

[1] R. S. Baker, "The Vitality of Mormonism," Century Magazine, June, 1904, p. 171.

[2] The Mormon people as a whole followed this advice undeviatingly. Obedient to orders, they paid no attention for many years to the vast mineral wealth lying in the mountains at their doors, but contented themselves with assuring their future by agriculture. It remained for subsequent non-Mormon settlers to open up the rich Utah mines. Later, however, Mormons entered the mining field and today among their number are many of the leading mining men in the state.

stability of character of any people goes with foothold on the soil.

The vital need of food crops being so acute, the problem was reduced to one of production. And the new conditions made that an issue of such magnitude as to stagger a people less determined than the Mormons or a leader less resourceful than Brigham Young. Accustomed to the methods of farming used in the Mississippi Valley, they found here a mean annual rainfall of ten to twenty inches only. A new system of agriculture had to be devised; that system was irrigation. It is fairly certain that Brigham Young knew nothing of irrigation before reaching Utah. Whether he acquired a knowledge of it from the Indians, or indirectly from the Mexican Spaniards, or otherwise, is immaterial. The thing of importance is that it proved precisely the method to solve the problem which confronted the pioneers.

After the first experiment with irrigation proved successful in Salt Lake City in 1847, all the settlements made it the basis of their farming. When a colony had been located, the very first measure was the construction of the canals and ditches to carry the water from the mountain streams to the fields. In many instances it had to be brought a considerable distance, and only the simplest hand tools were available. The individual could not expect to cope with such a formidable task successfully. Only by the concerted effort of the whole community could the farmers secure the water needed to irrigate their crops. So " a destitute people, having no resources save the genius of their leader and the labor of their own hands, resolved to associate and organize their efforts to bring the water on, as the people of Holland were compelled to coöperate to keep the water out." [1] Thus the Mormons began the practice of that

[1] Charles Hillman Brough, Irrigation in Utah, pp. 12–13.

great system of coöperation which has since proved to be their economic salvation.

Acting as a unit, the whole colony built the irrigation system. First, the dams to store the water in an artificial reservoir, or the headgate to divert it, were constructed; next, the canal itself was dug; and finally, the ditches and subditches leading to the individual fields were made.[1] If the work was unduly extensive or difficult, all assisted in each of these separate phases, but usually some division of labor was possible. Generally the bishop of the town, who was the ecclesiastical executive officer and chief spiritual adviser, acted also as supervisor of this important practical part of colonizing. He it was who assigned the men to their various tasks and exercised a general oversight as to the entire operations. That such a method succeeded was due in no small part to the remarkable efficiency of the Mormon church organization [2] with its ingrained habit of implicit obedience to authority. Of the effect of this influence Professor Ely says: "Individualism was out of the question, and in Mormonism we find precisely the cohesive strength of religion needed at that juncture to secure economic success." [3] It was no uncommon thing,

[1] The greatness of this task appears from the following description of irrigation by Brough: "The methods of irrigation pursued by these conquerors of the desert, unaided by capital or previous experience, were almost identical with those in vogue at the present day. Canals were run from the canyon out upon the more level land of the valleys and there sub-divided into branch canals, and these again divided into laterals leading to every farm so long as there was water to be distributed. Each farmer had canals leading from the main one to every field, and generally along the whole length of the upper side of each field. Each field had little furrows a foot or more apart and parallel with each other, running either lengthwise or crosswise or diagonally across as the slope of the land required. Into these furrows the water was turned, one or more at a time, as the quantity permitted, until it had flowed nearly to the other end, when it was turned into the next furrow, and so on until all were watered." Irrigation in Utah, pp. 9–10.

[2] "So far as I can judge from what I have seen, the organisation of the Mormons is the most nearly perfect piece of social mechanism with which I have ever, in any way, come in contact, excepting alone the German army." R. T. Ely, "Economic Aspects of Mormonism," Harper's Magazine, April, 1903, p. 668.

[3] Ibid., p. 669.

at an early day in Utah history, to hear the bishop in the Sunday services order a certain number of men and teams to report for work on the canal during the ensuing week. For the invariable answer to this summons economic necessity was perhaps responsible as well as religious training. In such a way the canals were provided.

It need hardly be said that the pioneers performed this labor without pay. Their method of procedure was not concerned with capital or wages. By the very exigencies of the situation there could be neither. The only capital they possessed consisted of their own united strength and of this they contributed in approximately equal shares. Each man could therefore justly anticipate a fair proportion of the only remuneration possible to hope for — namely, the use of the water from the completed irrigation system.

When the water was finally secured, the question of its distribution was settled without difficulty by the application of simple coöperative principles. Each man was allowed the use of the water in such quantity and for such a length of time as was proportionate to the labor he had performed in the construction of the canal. In calculating this the use of his horses or oxen was counted in, if he had any. The right to continue utilizing the proportion of water assigned was dependent upon whether the individual, with his land, could make what is now legally termed a " beneficial use " of it. If not, he must give up the unused surplus to others who needed it, the amount of compensation being based on the labor of the first in the original building. Similarly, when a man moved from the particular irrigation system, he disposed of his water right to those staying. At first the irrigators looked rather to the use of the water than to any vested interest in it; but when finally

they secured legal title to it, as "shares of water," (computed either according to "second feet" or to the quantity needed to irrigate an acre), the previous relative distribution remained absolutely unchanged.

The general result was a practically equal division of water rights. Several causes combined to bring this about. In the first place, as has already been suggested, the coöperators all did substantially the same amount of work in the same time, because, by reason of their universal poverty, no one was equipped to do more than the man at his side. Again, they dreaded a monopoly of the water, for it was clear that their ability to farm depended upon each individual possessing the right to utilize it. Finally, Brigham Young had inaugurated a system of land ownership which tended towards an equitable result in the ownership of the water. Under his plan each man was to receive a tract of land no larger than he could farm by the most intensive cultivation. Accordingly, when Salt Lake City had been laid out into squares, or "blocks," of equal size (the same plan was subsequently followed elsewhere) each containing ten acres, the settlers received their land on this basis. In the center of the town a few blocks were divided into lots of one and a quarter acres, these to be owned by merchants and professional men with little time for any form of agriculture except gardening, altho at first such classes constituted a negligible part of the social body. Adjoining the center blocks was a tier in which the lots were of five acres, and formed the homes of artisans, mechanics, and laboring men, who, by devoting odd moments from their regular occupations to the cultivation of their land, could materially supplement their income. On the outside, in the "Big Field," lay the real farms. Varying in extent from ten to thirty acres, they were alloted to the owner according to the number

and working capacity of his family. Those who received the larger land holdings were expected to work a proportionately longer time on the canals. The outcome was not only an equitable division of the realty, but also an assurance that everyone, either by vocation or avocation, should till the soil. And since, in the beginning, the church authority was supreme, the plan was rigidly carried out. Combined with the dread of water monopoly and the general equality of laboring capacity, it tended inevitably toward an equal distribution of irrigation rights.

But did the plan of distribution reach the end its sponsors anticipated? Did it actually work out fairly, as any coöperative scheme should? What the people themselves thought of it is best shown from the fact that they have since utilized practically no other plan. Only the coöperative method has ever been popular in Utah. In neighboring states foreign capital has often been induced to construct irrigation plants with a view solely to selling the water to the farmers. Newell comments on the failure of such enterprises in Utah as follows: "There are very few large structures built by capital obtained outside the state and so far as can be ascertained, all investments of this character have been financially unsuccessful."[1] Universal acceptance of coöperation would not long have continued if the people had not remained convinced of its inherent fairness as well as its practicability. If defects existed, capable of being exploited by the more shrewd to their advantage and the subsequent detriment of others, none of the coöperators perceived them. "If the Mormon leaders," says Smythe, "had desired to organize their industrial life in a way to make large private fortunes for themselves, no single item in the

[1] Newell, Irrigation in the United States, p. 355.

list of Utah's resources would have offered a better chance for speculation than the water supply. It was perfectly feasible under the law for private individuals or companies to appropriate these waters, construct canals, sell water rights, and collect annual rental. By adopting this method, which widely prevails in other western states, they could have laid every field, orchard, and garden — every individual and family — under tribute to them and their descendants forever." [1] Yet not a single instance of such injustice has ever been pointed out. Indeed the very satisfaction of the people with their system, together with the advice of the church to avoid law suits and its practice of arbitrating disputes among its members, led to the rather curious result that the fundamental principles of irrigation law were formulated in California; altho irrigation was not applied in that state until 1849, two years later than among the Mormons.

Of the practicability of the Utah plan the results furnish the most satisfactory test. Beginning with no capital whatever, inexperienced in the new kind of agriculture, entirely out of communication with the rest of the world, the pioneers in an incredibly short time had constructed irrigation systems the extent and value of which dispel all doubts as to the feasibility of the coöperative method. The following statistics Bancroft gives for a period three years before the first railroad reached Utah and eighteen years after the arrival of the first settlers: "In 1865, 277 [canals] had already been constructed at a cost, including dams, of $1,766,939, with a total length of 1,043 miles, irrigating 153,949 acres, and there were others in progress at this date the cost of which was estimated at $877,730." [2] Finally it

[1] Conquest of Arid America, p. 59.

[2] Bancroft, History of Utah, San Francisco, 1890, p. 722.

can be stated that the Mormons at the present time continue to utilize in large measure the identical means of securing irrigation water as at first. Long continued use and impracticability seldom go together.

While the acquisition of water furnished the principal reason for associated endeavor in the colonization of Utah, it was by no means the only one. In exactly the same manner the logs from the canyons and the sun-dried adobes were obtained with which to build the houses. Similarly, the community constructed the usual palisade for protection against the Indians. Last, but most important, coöperation made it possible to put up at once, as was universally the case, the town meeting house, which served alike for religious worship, civil government, amusement center, and schoolhouse.

It is perhaps open to controversy whether the first Mormon system conforms with the usual technical requirements of a coöperative society. Certainly there existed no formal associative body as such. The colonists acted, not in pursuance of a definite code of rules and regulations previously drawn up, but because, with their nature and ideals and under their environment, their course was the natural and logical one to follow. But what the initial effort at coöperation lacked in formality, it made up, as has been shown, in inherent strength, adaptability, and efficiency. Determined as much by economic need as by conscious planning, a practical rather than a theoretical scheme, it nevertheless served its purpose effectively and completely. Its object was to support a people and furnish them a home; it succeeded in attaining that object. Despite its informality, this first type of Mormon coöperation approached more nearly to coöperative ideals than either of the stages which followed. It is fairly within reason and the facts of the case to conclude

that it possesses the attributes which Holyoake sets out as essential to true coöperation — namely, it "commences in persuasion, it proceeds by consent, it accomplishes its ends by common efforts, it incurs mutual risks, intending that all its members shall mutually and proportionately share the benefits secured." [1]

II

The second phase of coöperation among the Mormons was evidenced in the establishment of coöperative stores. For a people whose whole attempt to settle the territory was based on mutual assistance, the transition from united effort in colonization to associative organization in commerce was but a logical development. The change was in no wise perplexing to them; should not the same principles of coöperation which experience had demonstrated to be so effective in founding their communities prove equally desirable when applied to trade? This is precisely what happened. But a clear conception of the Mormon coöperative stores can hardly be hoped for unless they are viewed in relation to the background of early Utah commercial history.

In the very nature of things commerce was nonexistent at first. The primal necessity was to take measures to survive; and, beyond that, the few needful exchanges of commodities were effected by barter. The isolation of the pioneers added another factor. No money was to be found, and, in any case it would have been valueless for lack of purchasing power. But as the settlements became more firmly established, immediate wants were satisfied, and a scant surplus of food supplies came into existence. This furnished a medium with which to trade for other needed articles and also a

[1] History of Coöperation in England, vol. i, p. 3.

commodity to sell. But who could buy? Purchasers appeared among the new immigrants, composed of recently arrived co-religionists. Moreover, a steady stream of gold seekers passed through Salt Lake City on the way overland to California. These people gladly gave the best of their adequate supply of eastern goods for Utah foodstuffs, or else paid the highest prices, in order to hasten their arrival in the modern El Dorado. This traffic led to the establishment, in 1849, by two non-Mormons, of the first store in Utah. From this time forward commercial development was more rapid. But aside from the few local products, the whole quantity of goods had to be freighted across the plains. Naturally, this gave rise to extremely high prices and, at the very best, a precarious supply. Finally, the first transcontinental railroad, the Union Pacific, reached the construction stage, and by 1868 was ready to enter Utah. At this point the Mormons set up their great system of coöperative stores.

The first attempt was an isolated one, typical of the others, but virtually unconnected with them. It is worthy of notice because of its priority and because of the peculiar conditions which gave rise to it. While Israel Evans of Lehi was in England on a mission from 1853 to 1857 (the Mormon Church has maintained an active propaganda abroad since its incorporation), he came in contact with the English coöperative stores and made a study of them. Upon his return home he announced his belief that the scheme could be installed among his own people to great advantage. As a result, an organization was effected under the name of Lehi Union Exchange, supposedly of the Rochdale type. With a capital of but $350, divided into shares of $25 each, and distributed among the maximum number of shareholders, it opened its doors for business on July 23,

1868, the first coöperative store in the West. The enterprise met with immediate success, so much so that at the end of the first six months a dividend of $28.20 per share was declared.[1] But this initial prosperity did not endure, and the following year the Exchange was merged into the state-wide structure of coöperative stores which in the meantime had been built.

The very foundation of this structure was the Zion's Coöperative Mercantile Institution, familiarly called the "Z. C. M. I." The leaders of the Mormon people established this organization by their own personal counsel and action, supervised its conduct and development, and directed its affairs. It served as the great prototype to all the smaller stores throughout the Mormon domain and was closely connected with them by business ties. It becomes essential, therefore, to know the forces and facts which brought the concern into being, for without them a correct understanding of commercial coöperation in Utah is impossible.

In defining the causes which led up to the founding of Zion's Coöperative Mercantile Institution, little assistance need be expected from the few investigations thus far accorded the matter, because they are so wholly at variance with each other. But whatever their intrinsic merit, they at least furnish divergent paths of approach to the problem, so they must briefly be considered.

What may fairly be termed the non-partisan view is set forth by Tullidge in his *History of Salt Lake City*. At the time of writing, the author had withdrawn from the Mormon Church, but still retained the confidence of his former associates. He says:

> It must be confessed that Utah commerce, before the opening of our mines, gave all the money to a few hands. And this was one of

[1] A store which paid 113 per cent dividend on shares — not according to the amount of goods purchased — might well have astonished the Rochdale coöperators, after whose system it purported to be modeled, but such was the fact.

the immediate causes that brought forth Z. C. M. I.; as the leaders of the Church conceived it to be their broad duty, at length, to construct for the community a broader and more equitable system of commercial existence. . . . In 1868–69 the Mormon Church was brought face to face with implacable necessities which seemed about to weaken her. . . . Should the vast money agencies which had so grown up among her people, in the country which she had settled, at length overwhelm her; or should she, by combinations of her own, place these agencies at her back and preserve her supreme potency? Brigham Young answered these vital questions in the organization of the Z. C. M. I.[1]

The distinctly anti-Mormon opinion is found in Stenhouse's *Rocky Mountain Saints*. Stenhouse was an apostate from the Church and his book is a bitter arraignment of all things Mormon. He states:

. . . Later in the same year the Prophet conceived the idea of uniting all the Mormon merchants in one grand, coöperative, commercial scheme, by which he hoped finally to be able to "freeze out the Gentiles" who were then in business, and discourage those who might have entertained the idea of coming there when the railroad was finished. . . . He contemplated one general, wholesale, cooperative store that would supply branch stores in every ward in the city and in the country with all the goods that would be necessary for the peoples' consumption.[2]

Whitney in his *History of Utah* presents the pro-Mormon view of the matter. The author, who was a prominent official in the Mormon Church, makes the following explanation:

Meantime the railway was becoming an accomplished fact. . . . For years the burden of the Tabernacle discourses had been: "Trade with and sustain your friends; let your enemies have none of your substance with which to work your downfall." It is true that up to this time the line had not been religiously drawn, for among the Gentile merchants were many who in their social and business intercourse with the Saints had won their confidence and were numbered among their friends. But as the railway project became more tangible there were threats and rumors, at first vague but afterwards

[1] Edward W. Tullidge, History of Salt Lake City. Printed "by authority of the City Council and under the supervision of a committee appointed by the Council and the author," Salt Lake City, 1886, pp. 383–84.

[2] T. B. H. Stenhouse, The Rocky Mountain Saints, New York, 1873, pp. 625–26.

definite and openly avowed, that that great civilizing agency would be used to break in pieces the Mormon Church. . . . Hence the instructions of the leading men . . . became more and more positive as the locomotive drew near, . . . that "a Latter-day Saint should not trade with an outsider." . . .

The enunciation of the exclusive commercial policy in the latter part of 1868 must be understood as only a preparatory step to the introduction of other measures. Among these nothing was more prominent than the establishment of coöperation.[1]

In one thing at least these excerpts concur; and that is the belief of both Mormon and non-Mormon that the advent of the railroad would effect a serious change in the status of commercial relations. There is evidence tending to prove that on the part of the Mormons it was feared the change would be inimical to them, for they suspected their local enemies of a design to utilize the new situation to crush out Mormonism entirely.[2] Whether these fears were justified is not important here. For the present purpose it is sufficient that such trepidation existed, and that it was translated to some extent into economic action. But granting existence of these feelings, does it follow, as the writers quoted seem to infer, that they were the main reason for the establishment of the Z. C. M. I ?

Such a ground seems entirely too narrow to account for the actual results; the ultimate, moving cause must be sought elsewhere. For twenty years the people had now practised coöperation. With its aid they had founded their colonies; by its use they had constructed their whole irrigation system. Their entire experience with associated endeavor had witnessed only the most beneficial results, consequently the utmost confidence prevailed in the doctrine. To the most casual observer

[1] Orson F. Whitney, History of Utah, Salt Lake City, 1893, vol. ii, pp. 278, 279, 280.

[2] See, for example, G. Q. Cannon's remarks, Journal of Discourses (a compilation of Mormon sermons), October 7, 1868, vol. xii, p. 290.

See also remarks of Orson Pratt, October 6, 1868, ibid., vol. xii, pp. 305–07; and of Brigham Young, ibid., vol. xii, pp. 301, 310, 312.

the peculiar genius of the Mormon people for the system, and the adaptability of the conditions to it, must have been patent. Is it strange, then, that Brigham Young should have proposed the extension of coöperation into the commercial field? Or that the people, in the light of the immediate past, so readily responded? The conclusion is inevitable. Perhaps the Mormon fear of a remotely possible economic subserviency gave the immediate impulse toward the establishment of the Z. C. M. I.; possibly too the movement was hastened by the success of the Lehi undertaking; and it is within the bounds of probability that Brigham Young may have been influenced by personal knowledge of consumers' retail associations in England, since he had spent considerable time there about 1846. But if these factors were influential at all, it was only as relatively unimportant concurring causes. The real proximate cause, which fully and logically accounts for establishing the Z. C. M. I., is found in the experience of the people with coöperation and its palpably evident fitness for the existing conditions.

A survey of the actual facts of the establishment of the institution bears out the correctness of this conclusion.

Agitation of the Mormon leaders for a "self-sustaining" people was the initial step in the movement. It got under way in the early fall of 1868, and, when the semi-annual conference met in October, formed the principal topic of discussion. Finally, Brigham Young presented the issue to the people in the form of a resolution, which was adopted in the usual Mormon fashion.[1] Somewhat later he explained his intentions as follows:

> What I have in mind with regard to this coöperative business is this: — There are very few people who cannot get $25.00 to put into

[1] "The question is not whether we have the right to be self-sustaining or not, but will we be self-sustaining. That is the question and we say we will be. What do you

one of these coöperative stores. There are even hundreds and thousands of women, who, by prudence, can obtain this sum. And we say to you, put your capital into one of these stores. What for? . . . [They] are instituted to give the poor a little advantage as well as the rich.[1]

But it needed little persuasion to win approval for the proposed scheme. In less than ten days after the conference sufficient stockholders had been secured to make possible a temporary organization. This was effected on October 16, 1868, Brigham Young being elected president and leading Mormon officials filling the directorate. With such a formidable array of officers the sponsors set to work to secure further support. Their procedure in obtaining it was different from that common to previous English coöperative systems. In contradistinction to the Rochdale stores, which accepted only subscriptions in money, the promoters of the Z. C. M. I. urged all Mormon merchants in Salt Lake City to become shareholders, and issued certificates in exchange for their goods and buildings on hand. By this method a stock of merchandise valued at several hundred thousand dollars was obtained, in addition to cash from subscribers who were not merchants. During the ensuing winter the project lagged in Salt Lake City, altho smaller "coöps" sprang into existence in several of the settlements at once, notably in Provo and St. George. But by early spring preparations had been completed, and on March 1, 1869, the Zion's Coöperative Mercantile Institution (called at first Zion's Wholesale Coöperative Store), opened its doors for business. This occurred in one of the stores exchanged with the company for stock. Shortly thereafter other branches

say, brethren and sisters? All of you who say that we will be a self-sustaining people signify it by the show of your right hands. (The motion was put and unanimously carried.)" October 8, 1868. Journal of Discourses, vol. xii, p. 286.

[1] April 6, 1869, ibid., p. 373.

began operations in similarly transferred establishments. Over all these was placed the All-seeing Eye and the motto, "Holiness to the Lord." Within a month the institution had a stock of goods on hand worth $450,000. Finally, on December 1, 1870, the store was formally incorporated with a capital stock of $220,000. The preamble of the articles of incorporation read:

> The inhabitants of Utah, convinced of the impolicy of leaving the trade and commerce of their Territory to be conducted by strangers, have resolved, in public meeting assembled, to unite in a system of coöperation for the transaction of their own business, and for the better accomplishment of this purpose have adopted the following constitution:[1]

Z. C. M. I. prospered from the beginning, the first year's sales amounting to $1,230,000. Altho most of the goods exchanged for stock were taken at the high rate current in the territory before the railroad reached Utah, the venture flourished nevertheless. This was not only a tribute to the principles upon which the store purported to be based, but also to the sagacity of its managers, who in general were none other than the merchants who had traded their goods into the new concern. The vitality of the Institution may be judged from the fact that in the panic year of 1873 it boldly began the construction of what was in those times an unusually large building, which was completed in 1875, bringing the heretofore scattered branches into one plant. In 1895 the company was re-incorporated with a capital stock of $1,070,000. Somewhat later the

[1] Zion's Coöperative Mercantile Institution: Agreement, Order, Certificate of Incorporation, and By-Laws. Published in Deseret News Book Store, 1870.

Compare this with the objects of the Rochdale Equitable Pioneers: "The objects of this society are to form arrangements for the pecuniary benefit and improvement of the social and domestic conditions of its members, by raising a sufficient amount of capital, in shares of one pound each, to bring into operation the following plans and arrangements." Catherine Webb, Industrial Coöperation (5 ed.), p. 68.

spacious building now occupied by the home store was erected.

But by far the most significant consequence of establishing the Z. C. M. I. was the universal adoption of mercantile coöperation throughout the territory of Utah. In practically every Mormon city, town, and village a coöperative store was started. The movement spread with unexampled rapidity, the method being, curiously enough, from the central body to the local branches — just opposite to the British line of development. The shares in each "coöp" were held by local residents, who exercised entire control of the management, but sentimentally at least they looked to the Z. C. M. I. as the head of their system, and for the most part at first secured their supplies from it. Wherever the colonization projects of the Latter-day Saints were carried, there was to be found a local "coöp." At the present time most, perhaps, of the Mormon settlements in Utah, western Colorado, Arizona, New Mexico, southern Nevada, Idaho, southwestern Wyoming, Alberta in Canada, and Sonora and Chihuahua in Mexico have coöperative stores. A conservative estimate of their number would be approximately 150.[1] A few of these stores have ceased to operate. In the enthusiasm of initial success several proposed venturing into milling and manufacturing, but in general nothing came of it. A number were wrecked by this very exuberance, but the management of practically all of them was so conservative and sound that they still survive.

How do these outlying coöperative stores compare in plan of organization and in the manner of conducting

[1] This is the number which the Z. C. M. I. gives, as obtained from their business dealings with the smaller stores. Assistant Church Historian Andrew Jenson, who, among Mormon officials, is best qualified to speak on the matter, informs the writer that, while he does not doubt the reliability of this estimate, he is inclined to believe there were certainly not more than one hundred and fifty small stores and the number might very well have been less.

business with well-recognized systems elsewhere, such as the Rochdale plan? Capital was provided by the stockholders in shares usually of $25, but not uncommonly of $10, in order to bring the stock within almost universal reach. In general it was sought to obtain the head of each family as a shareholder. Goods were sold at market price, but at first a not inconsiderable part of the business was the exchange of dry goods for farm produce. In such transactions some of the "coöps" issued their own paper script which was redeemable later in merchandise. A few stores accepted tithing script, from the church tithing offices, in payment. There seems to have been no fixed rule as to giving credit, but the practice was much more common in later years than in the beginning. The close religious bond between the Mormons effectively eliminated any practice of short weights or measures, or the wilful sale of impure goods.

Thus far there is no dissimilarity between the Mormon and Rochdale systems. It is in the manner of dividing profits that the greatest apparent difference is found. So far as can be ascertained, profits in the Utah coöperative stores were always distributed on the basis of the shares of stock held and not according to the amount of goods bought. The Rochdale device of giving metallic disks with each purchase in order to determine, at stated periods, the total quantity of trading done, was unknown among the Mormons. Nor was any fixed charge paid to capital other than the dividends. (As a matter of fact, the dividend returns have usually been at the current rate of interest in the West, from 6 per cent to 9 per cent; so they have approximated a fixed amount.) But this deviation in division of profits from the English method did not necessarily mean that different results were obtained.

In the first place, the shares in the store, as to most cases, were almost evenly divided among the members. Again, practically all the stockholders were farmers, each facing the frontier problems and conditions common to his neighbors. Little variation therefore occurred in the amount and kind of goods each had to buy from the store. Hence, given a certain amount of profit, substantially the same amount would be apportioned to each coöperator whether the division was made on shares or on purchases. This was particularly true in the years immediately following the establishment of coöperation, but increasingly less in after years, when the economic conditions of individuals became more diversified.

The method of voting was another characteristic in which the Mormon stores differed from the British type. Voting has always been based on shares, as in ordinary joint stock corporations. In the beginning this amounted virtually to "one man, one vote," because the members held the same amount of shares. With the lapse of time and the passing of uniformity of shareholding in the association, equality of voting power also ceased.

No difference is perceivable between the Utah and Rochdale types as to management. The Mormon coöperators periodically elected a board of directors from their own number to control the company's general policy and a manager to have charge of the business transactions. Full and complete reports were rendered to the members at stated intervals.

From this comparison it is evident that the Mormon coöperative stores differed from the English consumers' retail associations in certain aspects of organization and method. But the variation was one of form rather than of substance. On the whole, each used about

the same means to accomplish the same ends — a widespread ownership of the store by the purchasers of its goods, and an equitable division of its profits. This was particularly true of the Utah concerns in the beginning. With an appreciable part of the population as stockholders in the town "coöp," it represented, not a business under the control of a single proprietor, nor one dominated by a syndicate composed only of a few members, but the concerted effort of a multitude of small owners to carry on trade for their common benefit. It seems but reasonable to conclude that the Mormon coöperative institutions possess the characteristics common to the Rochdale type. However that may be, there is no gainsaying that the local "coöps" furnished the most suitable means for satisfying the commercial needs of the times. By their use a people with the most meager capital, acting jointly, was able to supply the settlements with merchandise to an extent not possible of attainment otherwise, as conditions then existed; and at the same time to reserve all the profits to themselves. No matter how the Mormon system be classified in comparison with other types of coöperation, its effectiveness for the purpose at hand remains indisputable.

After the lapse of half a century certain changes took place. The idea of connecting all the local establishments with the Z. C. M. I. has long been abandoned, and today several other wholesale houses in Utah are close competitors for their patronage. As to their methods of conducting business, there has certainly been some departure from early standards. To a limited degree the shares of the country institutions have come to be concentrated in the hands of the more shrewd, resourceful, and powerful stockholders. The existence of such a tendency is acknowledged even by

the most ardent advocates of the system. In so far as such a change has occurred, the real coöperative characteristics of the stores have been destroyed, because the very essence of coöperation in the early Mormon stores lay in their ownership by a large number of shareholders who had each contributed about the same amount of capital. But the extent of these inroads on the early system must not be exaggerated. Nearly all the stores still have an extensive list of stockholders, so many in fact that it is probably not an overstatement of the present situation to assert that the outlying stores retain most of the benefits intended by their founders.

Can a similar claim be made for the Z. C. M. I.? Beyond doubt it is a successful business enterprise. Its capital still remains at $1,070,000, but its operations have reached gigantic proportions. The shares, which were originally subscribed at $100, today have a market value of $389. The stockholders now number approximately 650. From the beginning dividends on stock average 11 per cent, but at present are on a 20 per cent basis. To date the company has paid in total dividends $5,281,628.15. It employs 700 people, whose wages make an annual expenditure of $600,000. Sales for the fiscal year 1915–16 amounted to $6,160,698, and total sales to date reach the sum of $176,500,000. Besides conducting the manifold activities of a modern department store, together with an extensive wholesale business, the Z. C. M. I. manufactures shoes and duck clothing. The capacity of this one department is 500 pairs of shoes and 100 dozen " overalls " daily, the raw materials for which cost $140,000 a year. The stock still remains mostly in Mormon hands, altho some of the shares infrequently appearing on the market have been acquired by non-members of the Church. Joseph

F. Smith, president of the Church, is also president of the Institution; and with two exceptions his ecclesiastical predecessors have likewise been at the head of the company.[1] Perhaps most of the trade is still carried on with Latter-day Saints, but the patronage of the store, both in retail and wholesale, is far from being exclusively with Mormons.

Granting the financial success of the Z. C. M. I., there still remains the question whether it is, in fact, as coöperative as its name implies. Critics have not hesitated to assert that it is not in the slightest degree coöperative. Stenhouse regarded it merely as Brigham Young's private weapon to drive the Gentiles out of business with the ultimate purpose of clearing them out of the territory.[2] Albert E. Wilson, writing in a German periodical, designates it a "combine" and "trust" and argues that "on account of its organization and the method of dividing profits, we must deny the Zion's Coöperative Mercantile Institution its coöperative character."[3] Even Whitney concedes:

[1] The eighth article of the present charter of the Z. C. M. I. states: "The directors and officers of this corporation shall be elected by ballot, at the general meeting of the stockholders, to be held on the fifth day of April in each year, and the persons receiving a majority of the votes cast at such meeting, shall be held and declared to be elected. . . . Each stockholder shall be entitled to as many votes as he holds shares of capital stock. . . ." Zion's Coöperative Mercantile Institution: Articles of Re-incorporation, etc. Salt Lake City, Utah. George Q. Cannon & Sons Co., Printers, 1895, p. 5.

[2] The Rocky Mountain Saints, pp. 626–27.

If such were the purpose, it proved a signal failure, for Bancroft states (History of Utah, p. 654): "Soon, however, even the Mormons began to disregard their leaders against trading with gentiles or apostates. The spell was broken and during the Conference of 1870 the stores of the latter, and especially of the Walker Brothers, were so crowded with purchasers that it was impossible for them to serve their patrons." One would suspect that if the Mormons really started the Z. C. M. I. to rid themselves of outside competition, they would have made a more determined effort than these facts indicate, because in other respects at that time they exhibited no lack of resource or power.

[3] "Soweit diese Angaben zutreffen würden sie die Gestalt zu einer gewöhnlichen Aktiengesellschaft stempeln. Angesichts der Tatsache, dass die Einzelgeschäfte schon vorher bestanden, haben wir es seit 1868 mit einer Fusion oder einem Trust in Utah zu tun. . . . Angesichts ihrer Organisation und der Methoden der Gewinnverteilung müssen wir aber der Zion's Coöperative Mercantile Institution den genossenschaftlichen Charakter absprechen." "Gemeinwirtschaft und Unternehmungsformen im Mormonenstaat," Jahrbuch für Gesetzgebung, 31 Jahrg., 89–139, 1907.

"It is true that a large proportion of the stock has been concentrated in a few hands and that the original idea of having all the people shareholders has in a certain sense been defeated." [1] How do these opinions conform with the facts? The facts are simple enough. The original articles of incorporation, published by the promoters in pamphlet form in 1870, contain the decisive information. Section 24 of the articles recites:

> The persons whose names and residences are as hereinbefore set forth, have each subscribed for the number of shares of the capital stock of said Zion's Coöperative Mercantile Institution as is hereinafter set opposite their respective names and have paid for the same in full into the treasury of said Institution, and at the par value thereof. — The names and numbers of shares being as follows, viz.:

Brigham Young	772	$77,200
George A. Smith	3	300
William Jennings	790	79,000
William H. Hooper	110	11,000
David Day	100	10,000
Brigham Young, Jr.	53	5,300
Joseph Woodmansee	50	5,000 [2]

Then follow fourteen other shareholders only one of whom owns as many as 21 shares. The total is 1990 shares. From these statistics the rather surprising fact is disclosed that four men possessed 1772 of the 1990 shares which constituted the company's stock at its incorporation.

In this connection it is to be noted that the Z. C. M. I., like the smaller retail stores, divided profits on the basis of shares of stock held and not according to the amount of purchases made. Voting similarly was

[1] History of Utah, vol. ii, p. 294.

[2] Zion's Coöperative Mercantile Institution: Agreement, Order, Certificate of Incorporation, and By-Laws. Published in Deseret News Book Store, 1870, p. 7.

Tullidge (History of Salt Lake City, p. 725), says there is only one copy of this pamphlet in existence, and that is "preserved by the secretary of the Institution." But the writer found another copy in the Harvard Library, from which quotations in this article are made.

based on shares and not determined by the principle "one man, one vote." But the very thing was lacking in the parent institution which gave the smaller establishments their distinctive coöperative aspect; and that was a multiplicity of small owners holding approximately the same amount of stock. At its inception, therefore, the Z. C. M. I. was not a real coöperative store, as that designation is usually understood. Nor did the situation change materially with the lapse of time. In 1895 the company issued copies of its articles of re-incorporation, which contain the names and holdings of its stockholders at that time, twenty-six years after its establishment. They numbered only 40, of whom five owned 8348 of the 10,770 shares, one of the five, however, holding 5833 shares as trustee.[1] The fact that there are today 650 stockholders shows that the ownership has lately become more distributed instead of concentrated, but certainly not to a sufficient extent to make the Z. C. M. I. a coöperative store of the Rochdale type.

The Institution is entitled to more credit, however, than this classification accords it. Even if it lacked coöperative organization and methods, its owners nevertheless maintained a coöperative aim. The most cynical observer will hardly deny the immense good it has done for the people of the state of all classes and creeds. Not only has it provided goods at reasonable prices when local conditions made it perfectly easy to do otherwise, but it has by that very practice forced other merchants to do the same thing, to the ultimate benefit of the purchaser. Five years after its establishment the founders of Z. C. M. I. issued a public statement in which they said: "From its foundation until

[1] Zion's Coöperative Mercantile Institution: Articles of Re-incorporation, etc., Salt Lake City, Utah. George Q. Cannon & Sons Co., Printers, 1895, pp. 7–8.

the present it has never advanced the price of any article because of its scarcity." [1] The same statement might be made today with equal truth.

Whether the Z. C. M. I. be regarded as a genuine coöperative store or not, that character, as has already been pointed out, cannot be denied the 150 smaller stores which followed it throughout Utah and the adjoining states. They form a body of evidence of such reliability and of such extent as to place beyond any reasonable doubt the success attained by the Mormons in commercial coöperation. It is probably true that this second phase of associative activity was not as truly coöperative as the first united effort in colonization. Yet the Mormon "coöps," existing still with but slightly modified attributes, possessing much the same aims, methods, and functions as at first, and with their original usefulness not seriously impaired, stand today a monument to the vitality of the principles upon which they were based.

III

The third type of coöperation among the Mormons is industrial. Just as the concerted effort in colonization laid the foundation for coöperative stores, so the success of the latter led up to the establishment of associative industrial enterprise. Much the same idea of self-dependence which was noted as the immediate impetus for starting the Z. C. M. I. lay back of the entrance into the industrial field. The Mormon people conceived it to be the wisest plan to rely, as completely as possible, upon their own manufactures. Efficient irrigation systems and prosperous coöperative stores bore convincing testimony of the practicability of united effort;

[1] Address to Latter-day Saints, July 10, 1875, p. 5.

while the almost unrivaled resources of the state, both in variety and in extent, together with an adequate labor supply from the constantly increasing stream of Mormon converts, made up the elements to which the same principles could be applied in industry. So a campaign was instituted which in vigor and effect has steadily increased up to the present, a campaign centered around the slogan, "Patronize home industry." Not only in public gatherings has this doctrine been advocated, but repeatedly from every Mormon pulpit in the Rocky Mountains. The result is the formation of a vast system of industries.

Perhaps the first attempt of any consequence was the establishment of a number of woolen mills. To stimulate this industry the legislature, in 1869, had appropriated $5,000 with which to purchase improved breeds of sheep and bring them into the territory. The most notable concern was the Provo Woolen Mills. To quote Bancroft: "It was built in 1872, on the coöperative plan, the people of Utah County being asked to contribute money or labor for the purpose and the material obtained at small cost. . . . For several years this factory was the largest west of the Missouri River." [1] By 1882 ten mills with an equipment of 120 looms and 15,000 spindles produced cloth to the value of $300,000; but this supplied only one-eighth of the local consumption, the balance of the wool from the 450,000 head of sheep being shipped east for manufacturing. Most of these factories have been closed for many years. Even the largest, at Provo, has only recently resumed operations, after having been sold to private capital.

The greatest of the Mormon financial enterprises was originated in 1890 — the beet sugar industry. As early as 1852 machinery had been purchased in France,

[1] History of Utah, pp. 731–32.

freighted across the plains by ox teams, and set up in Salt Lake City in an effort to make sugar; but the attempt was premature. Over thirty-five years later several far-sighted financiers of Utah undertook an investigation into the two beet sugar factories then existing in the United States at Grand Island, Nebraska, and Oxnard, California. They deemed the industry practicable for the inter-mountain region, so they incorporated the Utah Sugar Company on September 11, 1889. The original stockholders numbered 28, and they furnished a capital of $15,000, divided into shares of $10 par value. The stock issue was then thrown open for the public and a spirited campaign commenced. Not only did the incorporators themselves urge the people to invest, but the Church leaders gave the new concern their enthusiastic approval. The response was widespread, the stockholders exceeding 700, many of whom were men and women of moderate and even of scanty means. Finally, when the success of the project hung in the balance, the Church itself granted a substantial sum for the purchase of stock. At a cost of $500,000 the first factory was constructed at Lehi, and by the summer of 1891 it was ready to commence operations. The initial campaign in the fall and winter of that year produced 1,000,000 pounds of refined (granulated) sugar from the first crop of sugar beets ever raised by irrigation. The factory has been operated at full capacity every year since.

Particularly in the beginning, this industry offers an excellent example of the Mormon coöperative system and its benefits. The sugar company itself cultivated practically no beets, but relied on the near-by farmers for them, many of whom also owned stock in the company and therefore had a double financial interest in its success. Among the employees in the factory were also

a considerable number of small shareholders; indeed, after the harvest was in, not a few of the farmers could obtain employment there. Besides improving their land by the intensive cultivation which the successful raising of sugar beets by irrigation requires, the farmers had an unfailing money market for their crop. This not only benefited them, but also indirectly the merchants and traders, by putting more money into circulation. Furthermore, a rise in land values always resulted. Thus in a variety of ways participants in the coöperative system prospered.

But matters remained in this desirable situation little more than a decade. In 1903 the company, encouraged by its past success and the promising future of the industry, entered upon a policy of expansion. It constructed new factories in northern Utah and in Idaho, formed a new corporation, the Idaho Sugar Company, and increased its own capital stock. (Later all the companies were merged into one, the present Utah-Idaho Sugar Company, with a capital stock of $10,000,000.) These operations did not escape the notice of powerful eastern financial interests, and shortly thereafter the American Sugar Refining Company secured a majority of the stock. To accomplish this result most of the small shareholders were induced, for profitable considerations it is true, to part with their holdings. The effect was to destroy the coöperative aspect of the industry; henceforth there was only a plain joint stock company. Nor was the original basis restored when, in 1914, Utah capital, of which the Mormon Church furnished part,[1] secured complete control of the company by buying out the eastern shareholders. It is now coöperative only to the extent that its operations are

[1] Charles W. Nibley, Presiding Bishop of the Church of Jesus Christ of Latter-day Saints, Facts about Sugar, Salt Lake City, Utah, June 17, 1916, pp. 10–11. (Bishop Nibley is the official who has direct charge of the Church's financial operations.)

directed by men who originally sponsored the coöperative idea and are still presumably in favor of it, and only so far as approximately 2000 shareholders, the present number, make a $10,000,000 corporation coöperative. The beet sugar industry in the Great Basin, which had its origin in the Mormon coöperative system, has now developed, as is well known, to gigantic size.[1]

A society of landed proprietors, such as made up the the population of Utah, would naturally be confronted with the problem of providing adequate agricultural implements. The Z. C. M. I. did not deal in farming tools and vehicles, so the feasibility of having a separate coöperative organization to supply these articles soon became apparent. In 1883, a $100,000 company was launched, the stock subscription being thrown open to the general public, as in other Mormon enterprises purporting to be coöperative. Up to 1902 the capital stock was increased annually, and by that time there were 500 shareholders. In that year the present Consolidated Wagon and Machine Company was incorporated. It is a $2,500,000 concern and its letter head

[1] The following tabulation, based on a private letter from Mr. W. T. Piper, Assistant Secretary and Treasurer of the Utah-Idaho Sugar Company, shows the expansion of the original company:

Name of factory	State	Built	Capacity [a]
Lehi	Utah	1891	1165
Garland	"	1903	954
Idaho Falls	Idaho	1903	941
Sugar City	"	1904	894
Blackfoot	"	1904	866
Elsinore	Utah	1911	620
Payson	"	1913	709
Spanish Fork	"	1916	1000
West Jordan	"	1916	600
Brigham City	"	1916	600
Grants Pass	Oregon	1916	600
Yakima	Wash.	1917	600
Total			9549

In 1915 the company produced 174,929,800 pounds of refined, granulated sugar.

[a] Tons of beets per twenty-four hours.

carries the claim: "largest retail implement house in the world." Its total sales in the last year reached the sum of $2,750,000; and sales to date approximate $100,000,000. The company employs between 300 and 400 persons and maintains 50 branches in different parts of the intermountain country.[1] It has now about 700 stockholders, which means an average holding of almost $3600. From these statistics it appears that with the growth of the company has come an ownership increasingly more distributed, but there has never been any practice of allowing purchasers to share in the profits or the management. A more hopeful sign to the student of coöperation is the rapidly growing number of local farmers' consumers' organizations which deal directly with the manufacturer and purchase their implements, vehicles, and supplies at wholesale. According to announced plans, these associations follow the Rochdale system rather closely, since they pay a fixed return to capital, reserve a definite percentage of the profits for improvement of plant, and distribute the rest to buyers pro rata according to the amount of purchases made.

For a people who had adopted as a slogan and as a practice "Patronize home industry," it became increasingly evident each year that millions of dollars were being sent East for life insurance which might be kept at home. Accordingly, the Church authorities took the lead in organizing, in 1905, the Beneficial Life Insurance Company, capitalized at $100,000. Using the same well-established methods, a list of stockholders numbering 200 was obtained from all parts of the state. The capital was later enlarged to $200,000. The company has prospered from the beginning and today its business

[1] From a private letter from Mr. George T. Odell, General Manager of the Consolidated Wagon & Machine Company.

operations extend through ten western states. In the annual statement issued December 31, 1915, it reported gross assets of $1,465,440.45, surplus to policy holders of $264,961.09, and $16,577,044 of insurance in force. The present shareholders number approximately 100. This points to retrogression, rather than progress, along coöperative lines. Indeed it cannot be consistently claimed that this company is more coöperative in character than most of the other life insurance companies doing business in the state, and certainly not any more than the other two local companies. The Educational Director gives the following explanation of the present ownership of the company: "Of course the stock is placed on the open market and we have no way of keeping it scattered; nor has any attempt been made to concentrate beyond having sufficient of it in such shape that the President of the Company is able to guide its affairs without danger of conflicting interests interfering." [1]

The latest and most curious of the so-called coöperative concerns is the Hotel Utah. Impressed with the idea that the rapid growth of Salt Lake City warranted the maintenance of a modern hotel of metropolitan proportions and functions, the Utah Hotel Company was organized May 19, 1909, with a capital of $1,005,000. This with a bond issue of $1,000,000, made it possible to erect a $2,000,000 hotel. When completed, the building was leased to the Hotel Utah Operating Company, whose stockholders are practically the same as in the Hotel Company. From the original number of 72 stockholders at the time of incorporating, has now grown the present body of 85 shareholders. The hotel has prospered from the first, but the mere recital of

[1] From a private letter from Mr. John D. Giles, Educational Director of the Beneficial Life Insurance Company.

these figures is sufficient to show that it is not a co-operative industry.[1]

In none of these Mormon industries has there ever been any practice of dividing profits with purchasers. Nor, so far as known, has profit-sharing with employees in the form of extra wages in proportion to company earnings been customary with them. Profits have accrued solely to shareholders. All are highly successful business institutions which have performed an inestimable part in the commercial development of the state; but they are not coöperative. In comparison, therefore, with Mormon associated endeavors in colonization and in commerce, their so-called coöperation in the industrial field appears to disadvantage. Admittedly some industries tended towards coöperative methods at their inception; but there has been a steady trend away from such methods until today there remains among the Mormons not a single industry (as distinguished from the colonizing schemes and coöperative stores), which satisfies coöperative requirements.

[1] Other companies in which the Mormon Church has been, or is at present, interested are the Inland Crystal Salt Company, the Utah State National Bank, Zion's Savings Bank and Trust Company, the Salt Lake and Los Angeles Railroad Company, Salt Air Beach Company, Salt Lake Knitting Company, Deseret News Publishing Company, the Salt Lake Theatre, the former Utah Light and Railway Company, and the Union Pacific Railroad. But as these are in no wise coöperative organizations, they are not considered here. A most interesting article, which does discuss them, is found in World's Work for December, 1902: "A Successful Coöperative Society," by Glen Miller. See also "Proceedings before the Committee on Privileges and Elections of the United States Senate in the Matter of the Protests against the Right of Honorable Reed Smoot, a Senator from the State of Utah, to Hold His Seat." 59th Congress, Senate Document 486, Washington, 1906, vol. i, pp. 81–87.

In Utah are also a comparatively large number of building and loan associations. But they are of a type common to the whole United States, and do not bear any distinct relation to Mormon coöperation. The small country banks in the state approach somewhat nearer to the usual Mormon coöperative type, but in general their organization and functions are similar to rural banks elsewhere.

IV

Such is the history of coöperation among the Mormons. It discloses an economic phenomenon not paralleled elsewhere, for the simple reason that history has not otherwise seen a combination made up of people like the Mormons and of conditions similar to those in the Great Basin. And its growth has been as remarkable as its uniqueness. From the digging of the first irrigation ditch it has developed into the present vast system of agriculture, commerce, and industry, with their ramifications over the entire arid West. Having traced this growth, it remains now, by way of conclusion, only to point out the chief factors responsible for it in the past, and to determine its present status.

Three elements have stood out as the underlying causes: first, the physiographic conditions; second, the religious organization of the Mormons; and third, Brigham Young.

Mention has already been made of the arid conditions in Utah which led the pioneers to evolve irrigation. This was, of course, only the inevitable response to environmental influence, a natural functioning of the stern law of necessity. The irrigation system grew up because it had to; and coöperation came into being because it was found to be the sole means of furnishing the canals which irrigation required.

But the mere physical conditions could not alone have been responsible for the coöperative system which arose. Other parts of the arid West have since been reclaimed without bringing forth such a method. The existence of coöperation in early Utah and its absence in neighboring states when physical conditions were identical must be accounted for by a difference in social

structure. In near-by states the colonists acted individually and were not connected with each other by any particular interest, while in Utah there existed a compact social body, closely united by common ties and easily capable of being used as a vehicle to cope with general needs. This common bond was the peculiar church organization and religion of the Mormon people. With an organization particularly fitted for efficient united endeavor, with religious ideals which impelled them to assist each other in practical as well as spiritual matters, with an adaptability for following leadership which is the very basic foundation of successful co-operation, it was perfectly natural that they should associate together to provide their economic needs.[1]

If the Mormon leaders are to be given a measure of credit for instituting coöperation, by far the most of it is due to Brigham Young. He it was who perceived the ability of the Mormon people to become coöperators and rendered that ability concretely tangible. Shrewd, forceful, energetic, and far-sighted, he was preëminently fitted to lead his pioneer people. "Whatever else may be said of Brigham Young," remarks Ray Stannard Baker, "he was a great general, a magnetic leader of crude tho undeniable power, and a shrewd law giver. We may scout the idea that he was in truth a divine prophet, but we may scarcely deny him a large gift of the prophetic imagination. He was perhaps the grossest materialist of his time, but he got results."[2]

And now, finally, what shall be said of the present condition of Mormon coöperation? Is the superstructure of a kind with the foundation or of an entirely different type? Fifteen years ago Professor Ely was

[1] Amos G. Warner believed this to be the chief factor in accounting for their accomplishments. Three Phases of Coöperation in the West. American Economic Association Publications, 1887, vol. ii, No. 1, pp. 118–19.

[2] "The Vitality of Mormonism," Century Magazine, June, 1904, p. 165.

inclined to believe that the original aims had been somewhat lost sight of. "The present condition of coöperation among the Mormons," he says, "is one which indicates retrogression rather than progress, and it is not wholly encouraging to believers in coöperative principles." [1] It is hard to escape from this conclusion. Certainly the study of the three different stages of Mormon coöperation bears it out. In the first stage, that of colonization, coöperative standards were maintained; the second phase, which had to do with the retail stores, experienced a noticeable departure from characteristics generally found elsewhere in coöperative associations; while the final type, evidenced in the industrial field, was hardly coöperative at all. Yet to say that each successive stage moved farther away from coöperative requirements than its predecessor neither means that no coöperative enterprises remain among the Mormons, nor that the methods actually used were not skillfully adapted to accomplish the purposes at hand. It has already been pointed out that the Mormons in their colonizing schemes provide their irrigation systems in substantially the same manner as in pioneer times, by united endeavor. The numerous small retail stores are yet performing much the same rôle of commercial usefulness as at first. And it can hardly be denied that the Mormon industrial and commercial system, which largely originated in their cooperative schemes, has made them a prosperous and independent people. It is natural that the Mormons, viewing their attempts at coöperation in the light of economic results, are not disposed to be dissatisfied with them.

HAMILTON GARDNER.

HARVARD LAW SCHOOL.

[1] "Economic Aspects of Mormonism," Harper's Magazine, April, 1903, p. 671.

FLAX: THE FIBER AND SEED. A STUDY IN AGRICULTURAL CONTRASTS [1]

SUMMARY

The old culture and the new, 500. — The two groups of products, 501. — European fiber culture, 504. — Modern flaxseed farming, 504. — Pulling and rippling fiber, 506. — Harvesting flaxseed, 507. — Preparing fiber; retting, scutching, 508. — Attempts to apply machinery to fiber production, 514. — Machinery applied to flaxseed farming, 519. — Migrations of the flaxseed crop, 521. — Attempts to establish fiber production in the United States, 523. — A comparison of productive agencies, 524. — The reasons for separate production of fiber and seed, 525. — The principle of comparative advantage, 526.

FLAX has been cultivated from time immemorial for the strong and enduring fibers of the plant. Out of these, prehistoric man first made his lines and nets, and later fashioned his clothing and household fabrics. Flax fiber, or "line" as it is commonly known, was the first spinning staple; and linens, supplemented by woolens in the colder climates, held the foremost position among the textiles until the industrial revolution of the eighteenth century. The use of flaxseed or linseed in industry is comparatively modern. Tho the medicinal and food values of the seed were known, the peculiar drying or filming property of the oil contained

[1] The writer has gathered much of his matter from observation and investigation prompted by the use of one of the flax products in manufacturing. The case of flax was clearly set forth twenty-eight years ago by Professor F. W. Taussig in "Some Aspects of the Tariff Question," vol. iii of this Journal. I am indebted to him for helpful criticism of this paper. Reference is made to the following books and papers: J. G. Wilkinson, Manners and Customs of Ancient Egyptians; F. Keller, Lake Dwellings of Switzerland and Europe; A. J. Warden, The Linen Trade; A. S. Moore, Linen; E. A. Whitman, Flax Culture; U. S. Department of Agriculture, Fiber Investigation Reports; H. L. Bolley, Flax Bulletins, North Dakota Agricultural College; Flax Culture, Bulletin 274 U. S. Department of Agriculture.

in it was not generally recognized until the fourteenth century. This important discovery made possible the rise of the art of oil painting in the Renaissance, and created an entirely new set of material demands. A new group of commodities then appeared gradually, and in time an essentially different branch of flax production. In surveying flax culture from its very beginning we find three periods. At first the plant was cultivated for fiber only. Then from the fourteenth century to the close of the eighteenth century it was still cultivated for fiber primarily, tho there was a secondary production of seed for oil from the same plants. Finally, after the industrial revolution, flax came to be grown for seed only, particularly in connection with the opening of new lands in this country. The older countries still continued to grow flax for fiber.

Thus we now have two separate and distinct cultures, which appear to be confined closely to seats of production possessing certain natural or social advantages. The older countries of Europe have retained the ancient flax fiber production. The newer countries have developed the modern flaxseed farming. Between the new culture of flaxseed as a grain crop and the old culture of flax fiber as a garden and handicraft product, there are many contrasts interesting to the student of economics. This article will sketch some of the more striking features and examine the causes which seem to determine the source of supply of the varied commodities produced from the flax plant.

Of these there are two groups—the flax fiber products or linen textiles; and the paint and covering products of which linseed oil is the base. The first group comprises the time-honored and beautiful linens, damasks, lawns and cambrics, in addition to crash, bagging, nets, lines, thread and twine. The second —

the more modern and less familiar group — includes paints, varnishes, printing ink, oiled fabrics, oil cloth, linoleum, imitation and patent leather, waterproof clothing, oilskins and soap. The linseed products now form a larger item in the world's annual income than the linen textiles. At the close of the eighteenth century the situation was quite different. Then linseed oil was in little use, while linens were the universal textiles for personal and household use. The causes which brought about this revolution must be examined at some length.

There are several varieties of flax, but the blue-flowered flax plant, linum usitatissimum, yields all the fiber of commerce and nearly all the seed. It is an annual and can be grown in almost any climate. It is found in Alaska and Argentina, in the alluvial soil of Mesopotamia and the sandy steppes of Russia. Most of the seed of India is produced by another variety of flax — the yellow-flowered plant, linum trigynum. This has the same general characteristics of linum usitatissimum, from which the great bulk of flax products is derived. The plant has a pithy wooden stem covered with a fibrous bark. The bast fibers[1] are extracted by decomposing the plant, and when prepared become the "line" of commerce, so highly prized for spinning and weaving into linen textiles. Tow or codilla is a by-product of the processes by which the dressed flax or line is obtained. It is used for making the coarser yarns, twines and fabrics. These two fiber products, line and tow, form the base or raw material of the linen textile industries.

The base of the linseed industries is found in the oil contained in the cotyledons of the embryo plant in the

[1] The word fiber is used to describe the long hair-like compound of the bast cells of the plant.

seed of flax. This seed is about one-tenth of an inch in length, somewhat pear-shaped, and glossy, greenish-brown. It is easily and quickly handled in great bulk. In modern practice the oil is expressed by hydraulic presses in a highly-organized milling process, called in the trade "linseed crushing." The residue from the presses, linseed cake, is a valuable by-product used as a stock food.

Here are two raw materials of first importance, which seemingly should be joint products of the same plants. Yet in fact we find separate production: millions of bushels of flaxseed and millions of pounds of flax fiber or line, accompanied in each case with the rejection of a potential joint product. What is the explanation?

The production of good long line requires first the growing of good flax stems or canes. This is gardening — horticulture rather than agriculture. The greatest care is used, from the thoro preparation of the ground to the hand-pulling of the stalks at harvest time. The soil must be brought to the best garden tilth, and then settled or rolled to make a compact smooth seed bed. The seed is sown broadcast, preferably by hand. Eighty pounds to one hundred and sixty pounds, the larger quantity in the case of the finest line, are sown to the acre, so the plants will grow thickly and without branching. The field is then either hand-raked, dragged or brushed to cover the seeds, after which follows another rolling or treading. Treading with boards attached to the feet, and hand-spading, may still be seen in parts of Europe where the best flax fiber is produced. The careful preparation of the seed bed, thick sowing, and even covering of the seeds, bring up the largest possible number of shoots which develop into long sinewy stems with the branches at or near the top. Besides this, an equable climate causes the con-

tinuous and even growth of slender bast cells ensuring a fine tenuous fiber. The flax plant is peculiarly susceptible to injury from weeds, and the fiber grower wants the soil to bear only the flax stalks or canes, and these in perfection.

It is the European custom to begin weeding by hand — the only method possible in such thick growth — when the plants are but a few inches high. As numbers and length, not bulk, are desired, the thinning so often practised in other culture (e. g., *beet culture*) is omitted. Women and children creep slowly and carefully through the fields, examine every inch of ground and pull up every weed. They kneel face to the wind, and work toward it, so that plants which are bent over are straightened by the lifting action of the sun and wind. Two or three such searching weedings leave the ground wholly to the tall, slender flax stems.

There is no such culture in America, North or South, save in experimental plots. The nearest approach to it for any sort of agriculture is the truck farming in the vicinity of our larger cities. Thus the amount of flax fiber grown here and in Canada is of no consequence in the market. Where it is occasionally grown the rough and ready methods are far removed from gardening, and yield generally a kind of line suitable for the coarser yarns and tow products. Prime long line can be produced only by the most thoro and painstaking cultivation. The intention of the European grower of fiber, carefully carried out from the start, is to produce plants with tall, slender stems or canes yielding the greatest possible length and fineness of line.

In sharp contrast is the planting of flax for seed only. The desired end is the greatest number of flowering heads which will bear seeds. Hence a bushy form with many branches must be developed. To secure the

greatest yield of seed, the land ought indeed to be better tilled than for the ordinary grain crops, because the flax plant cannot take up raw manures immediately and is quickly weakened by weeds. Virgin soil is best, due to the abundance of natural plant food and the absence of weeds and fungi. Thus in this country, Canada, and Argentina, flaxseed growing has become large-scale frontier farming. All the modern farm machines are employed in preparing the soil and in planting the seed. From fifteen to twenty-five pounds to the acre are sown by a mechanical drill in rows about eight inches apart. The seed is effectually covered and the seed bed made firm and smooth by a plank drag, often drawn tandem with the drill. The result is a thin growth in rows, each plant having room to grow out rather than up — to branch and bear flowering heads. This secures the maximum yield of seed. Many farmers do not weed at all, tho the plants are so spaced by the drill that weeding or cultivating may be done with a disk harrow or other machine cultivator. The ideal is the most efficient seed-bearing structure; no further use of the stems or branches of the plants is contemplated. The great bulk of flaxseed is grown in the newer countries as grain, by extensive agriculture, employing horse or tractor-drawn farm machinery. There is a small secondary yield of seed in northern Europe, notably Russia, as a by-product of flax fiber production. Russia is the only country producing both flax fiber and flaxseed in large quantities. Tho some of this flaxseed is produced as a grain crop on extensive land holdings, with the modern large-scale farming methods and implements, introduced from the United States, Russia remains the chief fiber-producing country of the world.

Contrast now the two cultures at the next stage, the harvesting of the crops. The flax raised for fiber is

pulled by hand. The time is determined by the condition of the stalk, which should be green for about one-third its length. In this state the cane possesses its natural oil and gums and is in prime condition for making soft, pliant line. The seed is then in the milk, tho it may be saved by stacking the flax for a time in order that the seed may mature and cure. Many years ago this was a common practice, but the large-scale separate culture of flaxseed has forced the older methods into the distant background. Pulling flax is hard work. The laborer must kneel or stoop, and must grasp a handful of stalks near the roots and draw them from the earth. He then shakes them to remove the dirt, and if he has not taken care to pull stems of about equal lengths, he must sort them before laying them down. This pulling is frequently done by women and children in Europe. In Canada the limited amount of flax grown for fiber is usually pulled by Indians. It is the usual procedure to " ripple " the flax in the field as it is pulled. Rippling is getting rid of the seeds by drawing the stalks through a ripple or coarse comb provided with iron teeth so fashioned and set that the openings between them are wedge-shaped. The workers sit on a bench upon which the ripple is mounted with teeth upstanding. They grasp the stalks by the root end and draw the heads through the ripple. A cover on the ground catches the seeds as they are stripped off. They may be saved in this state and cured for crushing into linseed oil by spreading and drying them under cover. This requires time, space, frequent turning, and much patience; as a consequence they are usually fed to cattle at once. The stalks are then ready for the next process, that of " retting," by which the fiber is made ready for extraction. In certain parts of Europe, a small portion of the world's supply of flaxseed is saved

by tying the flax into bundles or sheaves after pulling, and stacking it away until the seed is ripe. The flax is then rippled or top threshed in the fall or winter, the stalks are again bundled, carried over into the next spring, and then retted. But the usual method, bringing quicker returns, is to ripple the flax in the field as it is pulled; the stalks are then bound into sheaves and are taken at once to be retted.

It will be best to leave the flax fiber crop at this stage and turn from the harvesting of fiber stalks to the harvesting of the flaxseed crop. In striking contrast to the long drawn-out production of flax for fiber is the production of the seed of the plant for the crushers making linseed oil. In this case harvesting follows about twelve weeks of the usual passive waiting of the grain grower. During this time the plants have put forth many branches which have borne all the late summer a profusion of ephemeral but beautiful blue flowers. The five-petalled blossoms have matured into bolls containing ten seeds each. In fruiting, the plant elements necessary to reproduction, including the oil, have passed into the seeds; the stems have become lifeless straw. While the bolls are still somewhat green and before they fully ripen and cast their seeds, the well-known harvesting machinery is drawn through the field by horses or tractors, and quickly cuts down the standing grain. The flax is then put through the power threshing machine, the grain is separated or beaten out and is ready for the market.

It is plain that good flax fiber for spinning cannot be made from straw which has passed through the rollers and beaters of the threshing machine. Even if it were not in a tangled and broken state, its fiber is short, coarse, and lifeless — lacking the very essence of good line. It is usually burned in the field where it falls.

Many inventors and experimenters, aroused by this apparent waste of flax straw, have spent fortunes in attempts to find some way of making from the straw the line or even the tow used by spinners. In this country alone many different processes have been thoroly tried and numbers of patents taken out. But so far all have failed to produce anything better than coarse fiber or tow, similar to that which is the residue from the operations for preparing line. Ventures requiring large investment in machinery and equipment have produced for a time limited amounts of the coarser fabrics, toweling and crash. Most of these undertakings have been abandoned, and in some cases the factories have turned to other products. Some tow obtained from seed straw is used for making twines. Upholsterers' tow, refrigerator insulation, straw mats and rugs, fiber board and paper have been made from it with varying success. New and elaborate processes are still being tried; yet the unquestionable fact is that all attempts to produce the better grades of long line from flaxseed straw have failed.

The flaxseed crop, harvested easily and rapidly, may now be sold. But in the other culture the flax fiber stalks or canes have only been gathered, and prepared for the next step in fiber production, that of retting. From the stalks the bast fibers must be got out whole and in spinnable condition. The fibers still possess their natural oil and gum and are bound together, and to the woody stem, by the plant substance known as pectose. This must be broken down by decomposition in order to extract the fibers. From the earliest times, the common method has been to subject the stalks to the action of water either in pools or streams — the surer and quicker way — or by exposure in the fields to the dews and rains, a somewhat longer and less certain means.

This process is called "retting"; in plain language, rotting. The first method is commonly called "water retting"; the second, "dew retting." This latter means is used in Russia, in certain other parts of Europe, and to a very limited extent in Canada, in places where there are heavy dews and plentiful rains. But water retting is still the process by which the best line is produced.

After the seeds have been removed the flax is bound up in sheaves and placed in pools or "lint-holes," made by damming small streams or by digging basins close to the banks of streams and connected with them. The usual lint-hole is about four feet in depth, eight or ten feet in width and of variable length. The sheaves are carefully laid in by hand, not on top of each other and haphazard, but placed in a slanting position, roots down, each sheave overlapping the one beneath, until the area of the pool is well covered. A wicker or straw mat is then placed on the layer, and a few flat stones put on top to make sure the immersion of all the sheaves. Flax is often retted in a running stream. In the famous river Lys in Belgium the flax is sunk in crates just below the surface of the river.

The reasons for pulling the flax instead of cutting it are now clear. In addition to the shortening of the fiber which would occur if the flax were cut, the lower ends would draw the water by capillary attraction and ret first. The retting must progress evenly and uniformly throughout the stalks. The roots naturally close the ends against soil and discoloration as well as against premature retting. The flax is handled with the greatest care to avoid breaking or bruising the stems and to ensure the production of an evenly retted fiber or line of good color, length and strength. To safeguard all these qualities the bundles are examined diligently as decom-

position advances. The best of cultivation will produce stems which vary somewhat in bulk and condition. To check the fermentation at just the right time so that the line retains its strength and just enough gum and oil to make it suitable for spinning, requires careful and unusual attention. This operation takes about two weeks.

Much of the finest Belgian flax is double retted in the river Lys. The sheaves are placed in crates which are sunk in the river for a short retting of about a week. The flax is then removed, dried and stored for a time, after which another retting of a few days in the crates finishes this more elaborate method. The double retting with the intermediate curing is said to bring out a finer and brighter line. The river Lys flows through the renowned Courtrai flax district. There is a strong belief amounting to conviction among flax and linen folk that it has retting properties far superior to any other water. This is probably a myth; the true explanation is to be found in the inherited and acquired skill of the flax workers and the better methods of the organized retting concerns in this ancient seat of the linen industry.

In the more common method of retting at one steeping the time varies from ten to fifteen days, depending upon the condition of the flax, the chemical properties of the water, and the atmospheric conditions. During the last few days the flax is frequently uncovered and tested thoroly to avoid over-retting. The retter, by manipulating a stem, can tell at once whether the fibers will come away from the shove or woody portion without injury. If over-retted, the flax is discolored and lacking in strength. If under-retted, the fibers cannot be separated without injury and extracted whole in the "scutching" process which follows. They will be torn and rendered into cheap tow instead of the valuable long line.

The test proving satisfactory, the flax is then lifted by hand from the pool, preferably by men standing in the liquor, so that the bundles may be washed off and handed out free from contact with the sides of the pool or any soil. This would be difficult with forks or any implements, and moreover, the fiber would be bruised and impaired. The liquor in the pool, a solution of decomposed vegetable matter, is a valuable fertilizer and is usually returned to the fields. Stringent laws prohibit the pollution of the streams by turning it into them. An extremely offensive odor and some very unwholesome fumes arise from the masses of putrefaction during the retting and subsequent grassing of the flax. After having drained awhile, the bundles are taken, generally by women and children, to grass lands and spread out for airing and bleaching. This grassing takes about a week during which the flax is frequently turned. The fibers are bleached and cured by the grassing so that they are ready for separation. When the woody part has become brittle, the flax is gathered, bundled and stacked for a few days, either in the fields or under cover, until it is thoroly dry and ready for the next process of " scutching."

Where the climate gives plentiful rains and dews, the extremely unpleasant features of water retting may be partially avoided by dew retting. This method is long and tedious. As it depends on the weather, it requires much labor and attention and double the time necessary for water steeping. The decomposed plants have to be actually taken in the hands in much the same way and for the same reasons as in water retting, but the decaying vegetable matter is spread out in the open and the offensive odors are dissipated. The dew retting having reached the right stage, the flax is usually taken under cover, to properly dry and cure the fiber for scutching.

The line obtained in this way is unevenly retted and dark colored. It is inclined to heat if not properly stored, because of the large amount of oil left in the fiber. For this reason it is pliant and well adapted to spinning after proper preparation.

The next step, completing the extraction of the fiber, is the process of "scutching," which separates the fibers from the woody part of the stalk, and from each other. The plant substances have been decomposed, the stalk with its bast fibers is dried, and the inner wood is very brittle. The simplest way to break up the wood and free the fibers is to grasp a handful of the flax, twist it, and strike the stems gently with the open hand. This is precisely what was done at first. Then a wooden paddle, called a "scutching sword" was used, and much scutching is still done with this simple instrument. Scutching wheels provided with paddles or blades, and run by foot or other power, are now in use. Even with the wheels much hand labor and skill are required, and scutching is far from a machine operation. Still, this is the only process in the production of true long line in which there is any application of machinery, however slight. Before the flax is taken to the scutching wheel it is passed through the fluted rolls of a rolling and breaking machine which presses open the stems and breaks up the wood or shove.

In the usual form the wheel has a number of projecting blades set like those in a revolving fan. The axis is horizontal and the blades revolve in a vertical plane, when propelled by a crank and treadle or a pulley and belt. A slotted board or rest for the flax called the "stock" stands close to the wheel. The scutcher grasps a bunch of the broken flax stalks at the middle and thrusts one end through the stock so that the flax will be stroked by the revolving blades, just hard enough

and long enough to remove the wood and short fibers, and thus make the line free and fine. He then changes ends and completes the scutching of the tress. If the flax has been retted properly, and if the scutcher has the required skill of hand and eye, the result is a yield of good line amounting to about two-thirds of the original fiber. The residue, the short and broken fiber which has been struck off with the wood, is tow. This is gathered and saved for making coarse yarns and twines. If the flax has been over-retted and weakened, or if under-retted so that the fibers do not readily separate, scutching will make tow of nearly all of it. A lack of skill and judgment in handing the best of flax to the scutching wheel will reduce it to mere tow. It will be seen that even with the wheel, scutching remains essentially a hand process. Moreover, it is, of necessity, a dirty, dusty, disagreeable operation. In addition to the particles of wood and fiber, there is decomposed vegetable matter and other soil in the air. Where many wheels are gathered together in scutching mills, such as are found in flax districts, the laws require ventilating systems. These are ineffectual, because if there were draft enough to take off all the dirt, much line and tow would be taken away too.

All the operations for growing flax fiber and getting out the dressed flax or line have now been described, and the grower can at last exchange his product in the market. The farmer who raises flax fiber, unlike the producer of flaxseed, grain or other crops, cannot market his product until he has put it through processes requiring much additional labor and time, extending far beyond the ordinary season of harvesting. Contrast the long, tedious, messy methods employed in growing and extracting the fiber of flax, with the simple and ready production of its great rival, cotton. This staple

is the pappus of the cotton seed and matures with it. The plants are grown by machine farming methods and the staple is developed by nature to the spinning stage. After cotton is picked it has only to be ginned, a very simple machine process since Whitney's invention; thus it is quickly and easily separated from the seed and made ready for the spinner. The cotton seed, once considered worthless, is now a very valuable joint product.

Some of the attempts to apply machinery and other economies to flax fiber production have attracted the attention of considerable groups of producers, tho none have displaced the older methods. The familiar farm machines have been tried experimentally here and in Canada for preparing the seed bed. The seed for fiber must be thickly sown and is scattered broadcast from the hand in the old countries, tho the hand-driven fan sower is sometimes used. In Canada horse-drawn broadcast seeders are occasionally used. Some growers use an ordinary drill adapted to broadcast seeding by feeding from the hopper through the spouts onto a wide slanting board hung just under them. The seeds deposited at intervals along this spreading board are jarred off by the motion of the machine as it is drawn over the field. The mechanical seeder is a great time saver and will sow ten acres while one acre is sown by hand. But the result of mechanical sowing for fiber is at best a spotted uneven stand of flax, far from the crop obtained by the gardening method, with its thoro and even hand sowing. No machine could be made for weeding or cultivating the thick grass-like stand of fiber flax.

To do away with the slow, back-breaking task of pulling flax many minds have schemed and worked, but so far without producing a successful pulling machine.

Most of the devices are attached to a reaper in place of the usual mowing or reaping mechanism. In one form there is a succession of finger-like projections, close to the ground, similar to those on the cutter bar of an ordinary reaper. As the machine is drawn against the flax, the fingers guide the stalks into the grip of rubber belts, running in opposed pairs on pulleys mounted vertically on an inclined platform. These belts grip and lift the stalks from the soil and pass them over an apron to the ground for curing. Much power is required to propel the weight of this machine with its collection of gears, pulleys, idlers, and belts, taxed with wresting the strong roots of the plants from the soil. The weeds are pulled with the flax and must be separated from it; the dirt must be shaken from the roots, and the stems must be sorted for length. All these tasks are still left for the hands. The ground should be rolled smooth in any case to ensure the production of long even line; but when a pulling machine is to be used, the field must be made as smooth as a putting green. So far, this quest is much like that for a machine cotton picker.

The retting process has probably attracted as many and as brilliant minds as any of the textile processes. Much might be written of the attempts to bridge the slough of retting. A century ago the Lee process promised a revolution in the methods of fiber preparation. The English Government gave special and unusual protection to the Lee patents, which covered elaborate machinery designed to do away with the long and objectionable methods of rippling and scutching as well as retting. The stalks were put through a threshing machine, then through fluted rollers to break apart the wood and the fiber. The fibers were afterwards cleaned and bleached by means partly

chemical, partly mechanical. Tho the Irish Linen Board and large producers in Scotland gave much time and money to complete and thoro trials of the scheme it failed to produce strong spinnable line.

Among the earlier modifications of the old time retting methods the invention of Schenck, an American, appears to be the only one used today. He patented in England in 1846 the first indoor or factory retting system. Vats containing heated water maintained at a temperature of about eighty degrees caused the retting to progress faster and without the interruptions incident to natural means. Schenck's process effected a great saving in time but never came into general use because of increased cost. The salient feature of his method, a temperature favorable to the rapid growth of the bacteria of retting, is found in certain present day processes. A later scheme to ret flax in steam was abandoned after many years of experimenting. High temperatures greatly hasten the extraction of fiber but make it brittle and unspinnable. Various chemicals and common substances like milk and oil have been used to quicken or improve the natural method but without success. Recently a French process has attracted the attention of prominent spinners. Briefly, it embodies the essential principles of Schenck's method, with frequent movement of the flax and changing of the water, simulating the retting in the river Lys and other running water. So far, it has not furnished any considerable addition to the supply of the best line.

A fiber factory was built several years ago in Ontario designed to produce line on a large scale by machine processes. A similar plant was established in the heart of the Montana flaxseed district. Electric cranes and machines as well as many novel devices were assembled with great outlay. The flax is de-seeded, not threshed;

the stalks are baled instead of being made into sheaves. Large concrete vats holding many tons of flax are filled with heated water under pressure, and charged with retting bacteria. After two days the flax is said to be thoroly retted. With heat and an exhaust fan the bales are dried in a few hours, and the fibers are then ready for extraction. They are got out by breaking and tumbling the flax in an automatic machine. The product is tow suitable for twines and the coarser fabrics. It has long been held that these short cuts through retting left too much pectose for a complete separation of the fibers, and that quick drying with heat made them harsh, brittle and unsuitable for line. The engineers of this factory retting system claim to have an entirely new type of scutching machine under construction which will produce true long line.

In scutching, as in the other flax operations, great efforts have been made to develop automatic machinery. The type of wheel described before in connection with the scutching process, appears to be the only successful implement for the purpose at the present time. This is not a machine, but simply a power-driven tool, and requires the skilled hand. All straight machine scutching has so far failed, because the cleaning, separating and fining of line is not a simple extractive process. The scutcher must actually see and handle the flax, in order to submit it to the scutching action just enough to remove the boon or shove and to separate the tenuous fibers of the line. A lack of judgment or deftness, carrying the scutching action too far, will reduce the best fiber to mere tow.

Reduction processes in general are not complex, and machinery can be applied without great difficulty to the extraction of an element. The chemical and mechanical means to reduce flax to the elementary cells of the

plant constitute a comparatively simple machine process. But the result is a conglomerate of fibrous matter, worthless for spinning and suitable for upholstery or mattress filling only.[1] The extraction of the hair-like fiber of flax, composed of the bast cells of the plant, overlapped and joined together, is a totally different and more delicate operation. To adjust and arrest the processes of retting and scutching appropriately, to separate the fibers, and at the same time to preserve the union of the cells of which they are formed — these are tasks calling for individual attention and for control modified to suit varying conditions. It is the precise measure of the action in both processes which determines the character and proportions of the complementary products — line and tow. While this handicraft requires no high degree of intelligence, it is one whose better craftsmen seem to possess some special aptitude. In fact all the way from planting to weaving the production of fine linen approaches a specialized art. In producing line the successive processes are usually carried through by the peasant farmer who raises the flax. Tho there are a number of retting concerns in the Courtrai district, and scutch mills are frequently found in flax districts, the production of dressed flax remains largely the handiwork of the European peasantry.

There is thus a striking contrast between the production of linen fiber and linseed. The old world product, flax fiber, is gained through intensive cultivation followed by the prolonged application of hand labor under conditions far from attractive. The new world product, flaxseed, is extensively cultivated and quickly harvested with highly developed machinery. In the old countries

[1] "Cottonised" flax was introduced before the close of the eighteenth century, when the first power spinning frames turned off cotton successfully but failed to produce yarns from the longer and less elastic flax fiber. The scheme was revived about the middle of the last century and received much encouragement in England and New England during the shortage of cotton caused by the Civil War.

we find the slow toiling handicraft bringing forth the fine, flax fiber for dainty linens; in the new, the rapid-fire machine production of grain in bulk for the linseed oil industries.

In the production of flaxseed every modern farming implement and machine is used. Tandem plows, harrows, and rollers, often drawn by tractors, prepare the soil. Seeding is done with a mechanical drill followed by a plank drag or a roller. Some growers draw this whole train of machines with a tractor, and thus plow, harrow and pack the soil, drill and cover the seed in one operation. In harvesting, the combined reaper and binder is most used. The binder is sometimes thrown off and the flax allowed to pass over the apron and fall to the ground. This is poor practice, because of the increased cost of raking and stacking the flax and the danger of mold if it is allowed to dry on the ground. Frequently a bunching attachment is put in place of the binder. A wagon then follows, the bunches are taken up and stacked for threshing. The header is common, and when used with a buncher attachment drops the flax as fast as cut into a wagon drawn alongside. When loaded, this wagon takes the flax to the stack and another wagon swings into place. Forty acres a day may be harvested by these means. A combined header and thresher, propelled by a traction engine, has been used in some sections where the bolls can be dried on the straw without loss of seed. Green or damp flax is hard to thresh. The usual method is to stack the flax for curing. It is then put through the power threshing machine, and the flaxseed, separated from the straw, is ready for the market.

The flaxseed crop is the most conspicuous example today of extensive cultivation. Many growers here and in Argentina plant three or four hundred acres. Tho

twenty-five bushels to the acre is the possible yield, the average is not far from ten bushels. With intensive cultivation more could be produced. But the crop is an alluring one to the frontier farmer; flaxseed is the only grain which can be grown to full yield the first season on land ploughed and planted in the spring. Many farming lands have been paid for with the flaxseed crop obtained from the first breaking of the soil. Some corn might be grown the first season, tho with a much smaller return. For a good wheat crop the pioneer farmer must wait until the second season, but flaxseed brings an immediate and profitable yield. It has often been planted several years in succession, but such cropping results in failure. A rotation with other crops, varied to suit the soil and climate, is needed to ensure good returns. It has been demonstrated that flax exhausts the soil no more than wheat or the other grain crops. In fact some growers claim that wheat will yield more after flax than flax after wheat. Rotation with other crops is in any case necessary, otherwise the land becomes "flax sick," in the farmers' language. The plants wilt and die if flax is planted too often. Professor H. L. Bolley of the North Dakota Agricultural College says it is not the land that becomes diseased, but the seed. He has shown the presence in the soil of micro-organisms from diseased flax which attack the seed and cause "flax wilt." The prime cause (fusarium lini Bolley), has been named after its discoverer. These fungi are found in soil possessing all the chemical elements of plant life. They are transmitted in the seeds, straw and chaff of diseased flax. The preventive measures are clean culture; then plump healthy seeds only should be selected and sprayed with formaldehyde. The careful cultivation and selection of seeds, together with pulling up and decomposing the plants at some

distance from the tillage, have prevented the spread of plant disease in the European fiber districts. Flax wilt has been the chief cause of the striking migrations of flaxseed — its wanderings from one new region to another.

The bulk of the flaxseed crop has been produced by the frontier farmer. He had the advantage of a better yield on newly broken land, and could produce the crop successfully for a considerable period, tho in time the land would become "flax sick." As the crop has been handled, after a few failures the standard grain crops tend to displace flaxseed and drive it on to another frontier. Now that science has found the cause of its wanderings, flaxseed may settle down so that a thoroly scientific culture may be developed. There is nothing in the economic conditions which would prevent continuing production in the same regions, as in the case of wheat, corn, and the standard crops. Like them it will always be produced most effectively on a large scale on the great outlying tracts.

A brief sketch of its wanderings in the United States will prove interesting, as it is this phase of extensive flaxseed culture which accentuates the contrast with the staid and intensive culture of flax fiber.[1] In colonial times flax fiber was an important product on the Atlantic Coast, and the seed for oil was a by-product. In the early days of the last century the expansion of the country and of building, with newly-discovered uses for linseed oil, had brought about a great increase in the demand for flaxseed. On the other hand, the rise of cotton and the decline of linen had caused such a diminution in supply that it became necessary to seek new sources. It is impossible to fix the exact date, but

[1] The movement of the flaxseed crop across our country, with the pioneer farmer, is clearly shown in Table No. I in the appendix.

early in the nineteenth century a new culture was tried on the new lands of western Pennsylvania and New York. Flax was planted for the seed alone and proved a successful crop for a time. From the records of old linseed crushing mills, and the data of our Department of Agriculture, the course of the flaxseed crop can be traced through the West as the land was opened to the settlers. From Pennsylvania the crop spread into Ohio, then into Indiana and Illinois. Cincinnati was the center and the market for flaxseed in 1850, the first year giving any accurate records. The crop then declined in the older states, Pennsylvania and New York, and advanced into Missouri; a little later, into Iowa and Wisconsin. In 1870 Chicago was the center. In the next ten years flaxseed spread into Kansas, Nebraska, and Minnesota, and Minneapolis became the market. In 1890 it was well advanced in the Dakotas, and that year saw the retirement of almost all the states producing flaxseed east of the Mississippi. The immense tracts of the Dakotas and Minnesota sufficed for a period, but about 1900 the crop moved into Montana, where it is now held up in its march by the mountains. The great bulk of flaxseed has long been produced in the northwestern states, tho there has been a smaller but similar movement to the Southwest, and some seed is produced in the far west. Duluth, at the head of the Great Lakes, is now the chief market. The lands of the prairie provinces of Canada are producing much flaxseed and Winnipeg is also an important market. Practically all the new land has now been cropped and flaxseed production seems to be on the decline in the states. Unless scientific methods are adopted our flaxseed production will gradually diminish. In the meantime, a newer country, Argentina, has entered her fields and has outstripped us. So far as can be judged from incomplete

crop reports, there is in that country a tendency similar to the movement in our own. As long as there are new lands in the world, flaxseed may keep on wandering, tho the scientific development of the culture promises a great change and the possible standardization of the crop.

No fiber culture of any consequence has ever been developed in this country, in spite of colonial and state bounties in the early days, many private promotions since, and continued aid from the federal government. The Department of Agriculture has maintained for years a bureau for plant fiber investigation. A chief object has been the encouragement of flax fiber culture, and much time, energy (and flaxseed also, in the form of printing ink), have been expended in vain attempts to foster even an infant linen industry. Tho many immigrants have come from the flax districts of Europe, they cannot be induced to continue in flax fiber production after settling here and finding more attractive and profitable employment open to them. Projects to develop the industry are still on foot. Probably the most recent is the attempt of the state of Oregon to introduce fiber production in the Willamette Valley. The Dominion of Canada has given government aid to the establishment of fiber culture. The early settlers in the Lower Provinces of Canada, like those in the New England colonies, produced flax for home consumption. The industry declined there as here. Later attempts to restore it, undertaken in Ontario with substantial backing and continued with energy down to the present time, have resulted in the sporadic production of small quantities of inferior line.

It is apparent that the countries having new lands, and a supply of labor accustomed to handle farming machinery, have an advantage in flaxseed farming. It

would not be impossible to produce flax fiber in these countries, but their labor would be applied less effectively to the fiber than to the grain. Small farming or gardening, on the other hand, is still the preferred pursuit of a large part of the population of Europe. On the Continent and in Ireland are an immense number of peasant proprietors or small tenants. Here is a great group of producers having inclination, aptitude and the social conditions for such undertakings as the growing of flax fiber. The fiber is usually grown, retted and scutched on the farmer's premises and by his family, with a ready supply of supplementary labor in the neighborhood. Money wages in France and Belgium for such work are 2 fr. 50 or 3 fr. per day. In Russia and Ireland money wages are less. An old Irishman once said when discussing the extremely disagreeable and unhealthy features of retting: "there are people all over my country who are willing to do anything for a livelihood." A livelihood, the means of existence, the "subsistence" of the older economists — this sort of life has played no part in the agriculture of the United States.

No doubt the European producer of fiber has some advantage in climate. The cool, equable temperature, and the moist, cloudy atmosphere of Ireland and the lowlands of northern Europe, are favorable to the growing of fiber. The sudden changes of our climate, from wet to dry and from hot to cold, check the growth of the plant stems and thicken the bast cells. Even where there are no droughts, the sunny atmosphere, the extreme heat of our summers, and the high winds, are unfavorable to the growing of prime flax fiber. True, there are localities in our country which come nearer the required conditions, such as Michigan and Wisconsin on the lakes, and the coast districts of Ore-

gon and Washington. In Canada two regions also are more suitable than other parts of the Dominion — the lowlands of western Ontario and the shore of British Columbia. Even Alaska has grown experimentally some very good fiber. But what matter the relative natural advantages? Apart from these advantages, the older countries because of labor standards, agricultural surroundings and acquired skill, will be able to apply their labor more effectively to fiber production. The newer countries with large tracts of land, efficient farm machines and skilled operators, will enjoy a substantial advantage in the production of flaxseed. If a scientific culture disposes of the wilt and develops the flaxseed crop, it will possibly settle down for long periods; in any case, it will always be conducted on the outlying lands on a large scale with machinery.

The two products, flax fiber and flaxseed, cannot be produced in the better grades from a single cultivation by any methods now known, because of the differences in the development of the plants which produce fine long line, and those yielding the rich, full seed. And even if these differences be modified or overcome, a vital element is still lacking. The oil — fundamental to both products — cannot be possessed in the required measure by both the seed and the fiber of the same plant at the same time. If the flax is allowed to grow until the seeds are fully formed and ripened, the stems are lifeless and brittle; the fiber has lost the oil and gum required for making prime long line. If the flax is pulled at the proper stage for making line, the seeds can be cured only by protracted handling and will not contain enough oil to return the expenses of production save in those countries having a supply of very cheap labor. One end defeats the other. To paraphrase an old adage — you cannot spin your flax and crush it too.

Until machinery can be effectively applied to the several operations in growing and extracting flax fiber — an improbable contingency — the characteristic direction of labor in the two branches of flax culture, and the sources of supply for fiber and seed, will remain unchanged. The differences between the two serve as an example of the way in which the principle of comparative advantage acts in production. Flax fiber or flaxseed *can* be produced in almost every country; but each *will* be produced, if let alone by governments, in those countries able to apply their labor most effectively to each. The production of either will be determined by comparative advantage; by the relative measure of the return when labor is applied to it. Flaxseed is produced most effectively under one set of conditions, and flax fiber under another. A climate suitable for either culture is found in many parts, and soil which will bear the flax plant is found all over the world. But soil and climate on the one hand, social conditions and skill of the required degree on the other, concur for fiber culture in certain regions only. These have a comparative advantage in fiber production. Labor applied to fiber is in them more effective than when applied to seed. Flaxseed can be produced in all of the fiber countries and is produced in some. Nevertheless, the countries with new and extensive lands have a clear advantage in flaxseed production; in addition, efficient farm machines and the mechanical skill to operate them combine to make their labor far more productive in flaxseed farming than in fiber culture.

Flax fiber can indeed be produced in the United States and the other machine farming countries, if labor be forced into this slow, plodding employment. But workers with mechanical inclination, the spirit of

enterprise, and plenty of land, will not take up this handicraft — such it is and is likely to remain — while they can find congenial and profitable employment in flaxseed farming under agricultural methods fitted to American standards. America has abundant land, and is trained and equipped for branches of production in which machinery can be used with greatest effect. Tho much may be accomplished in the future through invention and scientific development in the two fields of flax, the production of fiber and seed, if left free, will be regulated and determined by the proportional effectiveness of labor in the new countries and the old.

APPENDIX

TABLE I

PRODUCTION OF FLAXSEED BY STATES, CENSUS YEARS 1850–1910 AND 1915

Bushels (000 omitted) [1]

STATES	1850	1860	1870	1880	1890	1900	1910	1915
Penn.....	42	24	16	5	4			
N. Y.....	58	57	93	72	21	1		
Ohio.....	189	242	632	593	146	30	5	
Ind.	37	119	402	1419	18	1		
Ill.	11	9	280	1812	35	4	1	
Wis.....	1	4	112	547	68	141	119	94
Iowa.....	2	6	89	1511	2282	1413	141	162
Neb.....				78	1401	55	21	77
Minn.....			19	99	2722	5895	3277	3150
S. Dak. ..				27	1801	2452	4760	1650
N. Dak...					164	7767	10246	6534
Mont.....						1	447	1890

[1] Compiled by the writer from figures furnished by the Department of Agriculture. The step line indicates the decline of flaxseed from the peak of production in the several states, and the movement of the crop across the country with the frontier farmer. As evidence of the positive character of this movement, about 90 per cent of the total production in these states up to the census of 1910 will be found below the line. The crop of the southwestern states, not here shown, is small, and shows a similar tendency.

TABLE II

FLAXSEED ACREAGE AND PRODUCTION IN UNITED STATES, 1849–1915 [1]

(000 omitted)

Year	Acres	Bushels
1849	..	562
1859	..	567
1869	..	1,730
1879	..	7,170
1889	1,319	10,250
1899	2,111	19,979
1902	3,740	29,285
1903	3,233	27,301
1904	2,264	23,401
1905	2,535	28,478
1906	2,506	25,576
1907	2,864	25,851
1908	2,679	25,805
1909	2,742	25,856
1910	2,467	12,718
1911	2,757	19,370
1912	2,851	28,073
1913	2,291	17,853
1914	1,645	13,749
1915	1,387	14,030
1916	1,605	15,459

[1] Statistics of the Department of Agriculture.

TABLE III

World's Production of Fiber and Seed, 1911–13[1]

Some producing countries omitted because not reported
(000 omitted)

Country	Fiber (lbs.) 1911	Fiber (lbs.) 1912	Fiber (lbs.) 1913	Seed (bu.) 1911	Seed (bu.) 1912	Seed (bu.) 1913
United States	...	...	...	19,370	28,073	17,853
Mexico	...	...	...	150	150	150
Canada	...	...	...	10,075	26,130	17,539
Argentina, S. A.	...	...	...	23,424	22,534	43,305
Uruguay, S. A.	...	...	...	660	879	1,302
Austria-Hungary	68,026	80,729	71,976	890	874	801
Belgium	52,000	64,000	39,437	515	514	387
Bulgaria	878	308	...	12	6	8
France	45,003	46,074	48,437	496	576	740
Italy	6,078	5,511	5,732	341	343	405
Netherlands	20,929	21,217	16,606	579	428	326
Roumania	4,530	8,953	4,759	607	772	569
Russia (European)	785,136	1,172,059	1,703,209	20,544	22,177	24,456
Russia (Asiatic)	...	...	...	1,099	1,230	1,927
Serbia	2,091	2,095	...	...	...	...
Sweden	1,500	...	418	17	...	...
Ireland	25,179	29,021	28,341	...	...	...
British India	...	...	...	22,544	25,592	21,544
Algeria	...	...	...	16	13	15
Total	1,011,350	1,429,967	1,918,915	101,339	130,291	131,327

TABLE IV

World's Production of Fiber and Seed, 1896–1913[1]

Year	Fiber (lbs.)	Seed (bu.)
1896	1,714,205	82,684
1901	1,050,260	72,314
1906	1,871,723	88,165
1911	1,011,350	101,339
1913	1,918,915	131,327

Walter S. Barker.

Cambridge, Mass.

[1] Statistics of the Department of Agriculture. These are the latest complete figures, because all the important fiber-producing countries are involved in the war. The fighting on the western front has laid waste the best linen district in the world.

REVIEWS

KEMMERER'S MODERN CURRENCY REFORMS [1]

THE scope of Professor Kemmerer's *Modern Currency Reforms* is best indicated by its sub-title. A different designation might probably have been more apt, since many of the currency changes described are not particularly modern, and the volume does not include all modern currency reforms. It is a review of certain currency changes undertaken for the most part in countries of minor importance, and leading in most cases to the establishment of the so-called gold exchange standard. Viewed as a discussion of the introduction of the gold exchange standard the book is inclusive, covering the field thoroly. Inasmuch as there is no direct relationship between the several currency experiments which are considered, the volume is almost of necessity a collection of monographs, largely independent of one another. Indeed, there is some internal evidence that the several sections were prepared at different times and under different conditions. The author notes that the material has been in process of collection for a period covering thirteen years.

The plan of the book is primarily historical, and in each of the monographs which compose it the bulk of the space is given to a detailed and very careful account of the successive steps by which given currency problems have been developed and have then been gradually disposed of. This gives the volume its principal value. It impresses the reader as a very complete survey of material, of which large parts are not easily accessible, while other parts are to be found only in

[1] Modern Currency Reforms: A history and description of recent currency reforms in India, Porto Rico, Philippine Islands, Straits Settlements and Mexico, by Edwin Walter Kemmerer, Ph.D., New York City. The Macmillan Company, New York, 564 pages + xxi.

so fragmentary and disjointed a form that careful and skillful work is necessary to draw them together and to create a logical and consecutive analysis of the situations to which the data refer. A disappointing feature is found in the fact that there is comparatively little discussion of the principles at issue, and that the author's views and opinions are expressed only incidentally and sporadically. In a scientific inquiry it is of course well to be cautious in the expression of mere opinion; yet one of the principal services to be rendered by a work on so technical a subject is that of educating and informing the reader, and of assisting him to reach sound conclusions. In fact there are many cases in which the man of affairs, unfamiliar with Oriental or Latin-American conditions, will probably find it hard to detect the bearing of the material in this volume upon his own commercial and financial interests, even tho they may be closely affected by the conditions set forth.

The tenor and conclusions of the book favor the so-called gold exchange standard, that is, a currency mechanism or arrangement under which a silver circulation is maintained in the hands of the people for actual use, with a provision for satisfactory conversion into the gold currency of some other nation. Thus, in the case of the Philippine Islands, the gold exchange standard rests in practice upon the use of silver or silver certificates by the population, with arrangements for converting these media of exchange into American money either on the spot or at a designated point in the United States. The gold exchange standard, as thus conceived, presents itself as an intermediate condition between the gold standard as such and bimetallism. It avoids the necessity of obtaining or supplying a quantity of gold for actual use, or even for the reserves of banks; it permits the circulation of the less expensive silver, or the still cheaper paper representative of silver; and it avoids the evils attendant upon changes in the ratio of silver to gold by undertaking to maintain a constant and steady basis of convertibility at which silver shall be exchanged for gold or gold equivalents, or *vice versa*. Such a standard of value and exchange can be employed only

for and by a dependent country — one whose financial system is practically subordinate to or controlled by that of another nation. Professor Kemmerer at times seems to regard the gold exchange standard as an independent, self-supporting system. But the whole tenor of his work is to show that the reverse is the case, and that the success of the gold exchange system is in direct ratio to the degree in which the country adopting it is dependent upon another. The author is right in feeling, as he evidently does, that the story of the experience of the several countries has been sufficient to carry a very distinct lesson in regard to the use of this currency expedient, and that a detailed review of what has been done furnishes a valuable lesson as to the prospects of the system for the future and the extent of its applicability.

The best and most complete of the monographs included in the volume is that relating to the Philippine currency reform. Upon the arrival of the American forces in the Philippine Islands, they found a very confused and uncertain currency. The Mexican peso, and a slightly less valuable coin, known as the Spanish-Filipino peso, were in circulation. Various other media of exchange were in use, including bank notes issued by a local institution which enjoyed the exclusive privilege of note issue. All these different kinds of money ordinarily circulated at par with each other and at a value well above the bullion value of the Mexican peso. Serious difficulties were encountered after the installation of the military government, due to the obstacles to the maintenance of satisfactory relations between gold and silver. Disturbance of prices with corresponding suffering to the rank and file of the public, led to a recognition of the necessity for some improvement. The consequence was the bringing forward of various rival proposals: one the establishment of a local gold currency, a second the transplanting of the American currency system to the Philippines, and a third the adoption of the so-called gold exchange standard. The last named was eventually resorted to, and in the act of March 2, 1903, provision was made for the establishment of a gold standard with a theoretical gold peso exactly equal to fifty cents in

United States currency. A silver peso, worth a little less than thirty-eight cents, was provided for, with suitable minor coins, and the issuance of silver certificates was also permitted. Provision was made for a gold reserve, and the Government undertook to maintain the equivalence of Philippine currency and American money under conditions specified in an act passed by the Insular Legislature on October 10, 1903, at ratios ranging from $\frac{3}{4}$ of 1 per cent for demand drafts, to $1\frac{1}{2}$ per cent for cable transfers. Before the system could become fully operative, more or less effort was required to drive out the old currency and secure the introduction of the new money. Eventually the new system was more or less successfully introduced, and after a re-coinage of the new silver had been effected, necessitated by miscalculations in determining the proper content of the original issue, conditions settled to a normal basis. The author reviews at some length the recent uses made of the gold standard reserve fund, a fund maintained by the Government for the purpose of converting local currency into gold (American money), and very properly criticizes the practice of investing it in various long-term enterprises, or depositing it in banks where it passes directly into local use. The only palliation of this practice is found in the fact that at one time the gold standard reserve fund had become abnormally and unnecessarily large, reaching 43 per cent of liabilities. Due to the practices just referred to, however, it has in recent years fallen below 20 per cent. The author thinks that it should be maintained at 25 or 30 per cent, with the funds representing it in a strictly available form. In this he is probably correct, if reference be had merely to the situation existing prior to 1916. The organization of the Philippine National Bank has materially altered the state of things in the Islands and the form in which the currency question presents itself. This volume, however, was prepared before the organization of the new bank.

Very much the same method of treatment as is used in reviewing the history of the Philippine currency reform is applied in dealing with currency changes in India, the Straits

Settlements, and elsewhere. The Indian currency reform is more familiar to monetary students than most of the others dealt with by Professor Kemmerer, and need not be considered in detail. It is enough to say that the Indian system is similar in general to that subsequently adopted in the Philippine Islands, the plan adopted in India being indeed the original from which many copies were made. Professor Kemmerer believes that the test to which the Indian currency has been subjected during the past two or three years has shown the world that "few if any currency systems have more effectively met the shock of world catastrophe." Yet the detailed history of the various currency expedients adopted in India shows that there, as elsewhere, the gold exchange standard is essentially a patchwork expedient, unstable, subject to disturbance by shifts and changes in foreign trade, and requiring constant tinkering in order to function effectively.

In the Straits Settlements another special phase of the gold exchange standard is presented. The Philippines have a fairly normal and constant level of foreign trade with corresponding stability in rates of exchange. In the Straits Settlements variations in exchange are the rule rather than the exception, with the result that the system requires manipulation from time to time and correspondingly more careful management. The Mexican currency system and the transfer of the country to a strict gold standard in 1904–06 is interesting, but is today of historical interest only, in consequence of the disturbances which have brought about a complete breakdown of this carefully constructed gold currency system. Comparatively little instruction is to be had from the experience of Porto Rico, which has its own peculiar features, differentiating it from that of Mexico or the Philippines.

While the critical study of the currency and monetary history of the countries under review furnishes much that is incidentally interesting and instructive, the reader will conclude that the experience set forth in each case lacks breadth, or is vitiated by peculiar and exceptional conditions, to such an extent as to deprive it of world interest, taken by itself;

and he will probably conclude that the main significance of the volume is to be found in its bearing upon the general question of the gold exchange standard as a type of monetary system which may be used more extensively in the future. If he be given to speculation regarding the future, he will, for example, wonder whether some of the European countries who have lost their gold during the present war, and may desire to provide themselves with a cheap substitute for actual use, while nevertheless retaining such stability and permanence as the gold standard may afford, may not seek to make use of something resembling that standard in their own territories. The volume hence possesses a timely interest, and the question arises what are the lessons to be drawn with reference to the working of the various monetary experiments described in it. On this point the conclusion almost certainly would be, as remarked earlier, that the gold exchange system is available only for dependent countries. In short, it is not a monetary system, but a connecting link between an isolated market and the broader market to which it looks for support. It is not available, for example, under conditions where the country employing it is likely to exert a material influence upon conditions in the markets of the nations whose currency unit it has borrowed. The constant adjustment and tinkering with currency legislation and banking and exchange methods, necessary in order to make the system workable under all circumstances would put it practically out of the question except under conditions of almost absolute political control.

Nevertheless, as far as it goes, the gold exchange standard experience is interesting, and it has doubtless been worth while to set it down in this careful and systematic manner. True, much of what has been done is now out of date. Even of very recent years revolutionary conditions and economic developments have altered other portions of the work. Experience has shown that it is difficult for any nation to get the benefits of the gold standard without paying for them. Yet it is possible that in the years after the European war, monetary and banking systems throughout the world will be subjected to

extensive revision. Under these circumstances currency legislators and administrators will need the aid of all the exact information they can get, and will have to shape their conduct upon a broad basis of fact and conclusion. These considerations afford full justification for the publication of a volume like that of Professor Kemmerer. It will prove not least useful as a reference handbook.

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BARNETT AND McCABE'S MEDIATION, INVESTIGATION AND ARBITRATION; MOTE'S INDUSTRIAL ARBITRATION [1]

THE failure of Congress to provide funds for the publication of the reports made to the Commission on Industrial Relations by the investigators employed to conduct special inquiries in certain fields has, fortunately, led some of the investigators to provide for the independent publication of the fruits of their researches. Among them is this small book by Professors Barnett and McCabe.

Altho the title does not indicate it, the work deals only with mediation, investigation and arbitration in the United States. Furthermore, it does not pretend to cover the entire field; it does not deal at all with private efforts to settle industrial disputes, such as the protocols in the sewing trades of New York City; and in dealing with public efforts in this field, the discussion is limited to a very brief account of the work accomplished in recent years in Massachusetts, New York

[1] Mediation, Investigation and Arbitration in Industrial Disputes. By George E. Barnett and David A. McCabe. New York, D. Appleton and Company, 1916, pp. 209.
Industrial Arbitration: A World-Wide Survey of Natural and Political Agencies for Social Justice and Industrial Peace. By Carl H. Mote. Indianapolis, The Bobbs-Merrill Company, 1916, pp. 321 + xlv.

and Ohio, and to a statement of changes which, in the opinion of the authors, should be made in the present methods of handling industrial disputes both by the state and federal governments.

From a qualitative standpoint the discussion is in keeping with the high reputations of the authors in the field of labor problems. The reviewer has personal knowledge of the fact that the field investigation by Dr. McCabe was carefully done, and the descriptive portion of the work furnishes as accurate an account of the methods by which mediators and arbitration boards in the states named have attempted to perform their work as it is possible to give in terms of a general description. The truth of the matter is that since the success of mediation depends primarily upon the personality of the mediators and the willingness of the disputants to accept mediation, no two cases are alike in the problems which they present and the combination of qualities which they call for. The most successful mediator is he who can most readily adapt his methods to the ever-changing conditions with which he is called upon to deal. For this reason any description of mediation is bound to be vague, or else resolves itself into a description of the methods by which mediation has succeeded in particular cases. No successful mediator could draw up a formula for mediation which would be of much use to another man working in the same field, and it is more than likely that the mediator himself would be obliged to reject his prescription in the very next case with which he was confronted.

Of the three methods for dealing with industrial disputes presented by the authors, mediation, investigation and voluntary arbitration, it appears (p. 4) that the best results have been secured through mediation. In all the three states named the official mediators have succeeded in a considerable number, tho always a minority, of the cases in which they have intervened. If their success be measured by the proportion of settlements which they have secured to the total number of industrial disputes which have occurred during the period when the machinery for mediation was in existence,

it is of course far less notable. This usually is not the fault of the mediators. It simply means that they either did not know of the existence of the disputes, at least in time to make their intervention of any value, or else that the disputants were unwilling to permit of any interference by outside parties. It goes to show, however, that the prospect of preventing most strikes by the voluntary acceptance of the services of state officials as mediators is not one on which the public can, in the immediate future, gaze with any feeling of confidence. In view of the fact that any strike of considerable magnitude means a great loss to employers and employees, it is a sufficient excuse for the maintenance of boards of mediation by the state to point out that even tho the mediators succeed in preventing or settling only a few of the important industrial disputes, the savings thus made compensate many times over for the expenses incurred in the establishment and maintenance of the boards. On the other hand, the relatively small number of industrial disputes which are settled by the efforts of state mediators shows clearly that the public ought not to be satisfied with the establishment of this mode of securing industrial peace.

There are six ways, according to Professors Barnett and McCabe, in which mediators may be able to render service to the parties to an industrial dispute.

1. They may bring to the attention of both disputants the fact "that there are terms which both sides are willing to accept as a settlement" (p. 16). The method usually followed in Massachusetts is to bring the parties together in joint conference after they have learned that there does exist a common basis of agreement (p. 28).

2. The mediator may act as the "confidential intermediary" between the parties, effecting a settlement without bringing the parties together. This is the method which in recent years has been found most effective in Ohio. It "seems most likely to be successful in disputes involving recently organized workers" (p. 26).

3. In some cases "the mediators have been able to secure a settlement by a separate agreement with each party when

one party would not make an agreement with the other." (p. 30). The employers may agree to introduce certain improvements and the employees, on hearing of this, decide to return to work.

4. The mediators may themselves recommend terms to both parties and may in this way get certain concessions which would not otherwise have been granted (p. 35).

5. Sometimes the mediator is able to suggest a settlement which satisfies both parties and which they had not been able to think of themselves (p. 38).

6. The mediator may find a solution which is " not merely a compromise," but one " which safeguards the workman from industrial tyranny or preserves his vested interest in the trade and at the same time leaves the employer free to safeguard himself against incompetent workers and to improve in legitimate ways the processes of production " (pp. 42–3).

The authors admit that such settlements are not oftentimes the fruit of official mediation. Failure to secure them, with willingness to suggest a compromise which fails to result in social justice is, in the mind of the reviewer, the chief defect of mediation. Arbitration in this respect offers greater possibilities than mediation.

Where mediation has been most successful the mediators have been selected without reference to their politics, and their general reputation for fairness has enabled them to command in advance the confidence of both employers and employees. It will be an advantage to the chief mediator if he has not previously been closely identified with trade unions or with the employing interests, tho such connections do not always prove fatal to his work. For the assistant mediators it will be an advantage to have been affiliated with trade unions and employers' associations, for the chief mediator can then make use of them to appeal to their respective interests with a better prospect of securing the confidence of both sides than if he were lacking in such connections.

Public investigation and recommendation as a method of settling labor disputes receives relatively little attention from the authors. It has been used but little in Massa-

chusetts where, however, the act of 1914 requires the State Board of Conciliation and Arbitration to make and publish a report which locates the responsibility for failure to arrive at a settlement of the dispute. Still less use has been made of investigation in New York (p. 79) and none whatever in Ohio. The success of compulsory investigation in Canada in connection with the public service and mining industries shows that this method might well be used more largely in the United States, even if the disputants were not required to refrain from strikes or lockouts pending investigation (p. 86).

Voluntary arbitration of an industrial dispute by a state board of arbitration has rarely been used in New York and Ohio in recent years. In Massachusetts more use has been made of this method; mainly because the employers and employees in the boot and shoe industry, under their scheme of collective bargaining, leave the disputed points which arise in connection with the interpretation of their agreement to be settled by the State Board. Messrs. Barnett and McCabe think that this experience warrants the conclusion that a board of the Massachusetts type would be of value in other industrial states. This conclusion may be doubted, however, since other industries in Massachusetts have not, to any extent, followed the precedent set by the boot and shoe industry of referring disputed points in their trade agreements to the State Board (p. 93).

The plan proposed by the authors for a State Board of Mediation, Investigation and Arbitration is made up of the best points developed by the experience of the three states named. As the title implies, it makes use of all three of the methods and provides separate boards for the carrying on of each function. The plan would be much more expensive than that now in use in any American commonwealth. It might be worth the extra expense in the leading industrial states: that would depend largely on the confidence which the men appointed on these boards inspired in the minds of the employers and employees. In view of the fact that compulsion of any sort is lacking in the scheme, except that the boards of mediation and investigation are given the powers

necessary to secure the information required for their reports and recommendations, and in view of the further fact that collective bargaining is not yet the rule in most industries, it seems doubtful to the reviewer whether this more elaborate and expensive machinery would be much more successful than the systems now in use.

Professors Barnett and McCabe give practically no space to a discussion of the work of mediation and arbitration carried on by the federal government under the Newlands Act and the act of March 4, 1913, providing for appointment of mediators by the Secretary of Labor. They do submit a plan for a National System of Mediation, Investigation and Arbitration, which, if adopted, would take the place of both the above-mentioned acts. It provides for a Mediation Commission, and for an Industrial Council composed of leading organizations of employers and of employees to act as an advisory body to the President, to Congress and to the Mediation Commission. The Council is also to prepare panels, or lists of persons, from whom are to be selected the persons who are to serve on boards of arbitration and on boards of mediation and investigation. This latter part of the plan is clearly borrowed from the act of 1911 in Great Britain, creating an industrial council, tho the authors nowhere refer to this precedent.

It has been pointed out by other writers (especially by Professor Commons in *The Survey* of March 31, 1917) that the chief defect of the Newlands Act is that it provides no separate board for the interpretation of the awards of the arbitration board. The importance of clearly distinguishing between the making of an agreement or award and its interpretation was emphasized years ago by Sidney and Beatrice Webb in their account of collective bargaining in the English cotton industry, and it has also been developed in connection with the interstate agreements in the coal-mining industry in the Middle West. The plan outlined by Messrs. Barnett and McCabe does not, however, provide any separate machinery for the interpretation of awards. One's judgment on the adequacy of either of the plans proposed by the authors

must necessarily rest largely on his belief concerning the success of any plan of purely voluntary arbitration.

Mr. Mote's book on Industrial Arbitration is more comprehensive in its scope than the one just considered. It reviews the plans attempted in many of the American commonwealths as well as those employed by the federal government. It also describes briefly the methods employed by the European, Canadian, and Australasian governments and gives a short account of the most important efforts to prevent industrial dislocations by means of trade agreements, protocols and private arbitration boards in this country.

As far as the descriptive part of the book is concerned, little can be said in commendation of the work. This applies to all except the opening and closing chapters. The accounts of the various experiments are too brief to be of any value. They seldom include the most recent legislation and therefore fail to furnish the reader with a reliable statement of the present status of industrial arbitration in the various countries. There is also lacking an adequate discussion of the results of the legislative experiments, and one finds no explanation of the causes of failure where failure is claimed.

In spite of these defects, the opening and concluding chapters do display considerable insight into the problem presented by the phenomena of strikes and lockouts. The author sees that all attempts at mediation and arbitration are to be regarded, even when most successful, as mere palliatives, and he understands that industrial peace will come only when it is coupled with social justice (p. 325). There can be no industrial peace while wages and working conditions are unsatisfactory. Everything which makes the wage system more bearable, as Mr. Mote points out, adds to the chance of industrial peace. "Child labor laws, limitation of night work, shorter hours, sanitary and health legislation, monetary compensation for industrial accidents, minimum wage laws in the sweated industries and collective bargaining, roughly speaking, have marked the stages of progress" (pp. 323–24). The most effective method of preventing strikes is to create conditions under which they are not likely to occur (p. 326).

One thing seems clear from a perusal of these books as well as from a study of other material dealing with the progress of mediation and arbitration. The public is, year by year, showing greater interest in industrial conflicts and apparently is becoming less patient with their continuance. It cannot be said that, in this country, there is any pronounced sentiment in favor of compulsory arbitration. It is to be noted, however, that practically every revision of the laws providing for mediation or arbitration enlarges the power of the government to bring pressure upon the parties to come to a settlement of their disputes. The United States Supreme Court, in the Adamson case, went out of its way to make clear the fact that Congress possesses the powers necessary to provide for compulsory arbitration in interstate railway disputes. It probably only requires a railway strike of some magnitude to convince the country that it is desirable that Congress use these powers. When this comes about, however, it is likely that it will be accompanied by measures designed to raise the standards of living and otherwise improve the working condition of the employees, — not merely the members of the railway brotherhoods, but all those engaged in the railway service. These gains will more than compensate the workers for restrictions on their freedom to carry on industrial warfare. Such, at least, has been the history of compulsory arbitration in Australasia, and such it is likely to be in any country where the political power rests in the hands of the masses.

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